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POSTWAR MOVEMENT OF PRICES AND WAGES IN MANUFACTURING INDUSTRIES

BY

HAROLD M. LEVINSON

AND

SUPPLEMENTARY TECHNICAL MATERIAL TO THE STAFF REPORT

BY

GEORGE W. BLEILE AND THOMAS A. WILSON

MATERIALS PREPARED IN CONNECTION WITH THE

STUDY OF EMPLOYMENT, GROWTH, AND PRICE LEVELS

FOR CONSIDERATION BY THE

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STUDY OF EMPLOYMENT, GROWTH, AND PRICE LEVELS

(Pursuant to S. Con. Res. 13, 86th Cong., 1st sess.)

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This is part of a series of papers being prepared for consideration by the Joint Economic Committee in connection with its "Study of Employment, Growth, and Price Levels." The committee and the committee staff neither approve nor disapprove of the findings of the individual authors.

LETTERS OF TRANSMITTAL

JANUARY 18, 1960.

To Members of the Joint Economic Committee:

Submitted herewith for the consideration of the members of the Joint Economic Committee and others is study paper No. 21, "Postwar Movement of Prices and Wages in Manufacturing Industries."

This is among the number of subjects which the Joint Economic Committee requested individual scholars to examine and report on in connection with the committee's study of "Employment, Growth, and Price Levels."

The findings are entirely those of the authors, and the committee and the committee staff indicate neither approval nor disapproval by this publication.

PAUL H. DOUGLAS,
Chairman, Joint Economic Committee.

JANUARY 12, 1960.

Hon. PAUL H. DOUGLAS,
Chairman, Joint Economic Committee,
U.S. Senate, Washington, D.C.

DEAR SENATOR DOUGLAS: Transmitted herewith is one of the series of papers prepared for the study of "Employment, Growth, and Price Levels" by outside consultants and members of the staff. The author of this paper is Harold M. Levinson of the University of Michigan.

All papers are presented as prepared by the authors.

OTTO ECKSTEIN,
Technical Director,
Study of Employment, Growth, and Price Levels.

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STUDY PAPER NO. 21

POSTWAR MOVEMENT OF PRICES AND WAGES IN MANUFACTURING INDUSTRIES

I. Introduction [1]

This study paper is designed primarily to present the underlying data and the statistical procedures developed as part of the analysis of the postwar inflation prepared for consideration by the Joint Economic Committee of the Congress.[2] In general, the present report does not attempt to carry the analysis of the data beyond that already presented in the staff report; rather, the major purpose is to make the basic data generally available, and to present the results of the various statistical procedures which were employed in analyzing the movement of wages, prices, and profits in manufacturing industries from 1947 to 1958.

Sources and Limitations

In order to evaluate the major factors which might underlie these movements in the several manufacturing sectors of the economy during the period since 1947, data for a number of variables were obtained for each of 19 2-digit Standard Industrial Classifications in manufacturing. All of these basic series are presented in appendix A, together with a description of the sources and methodology used. At this point, however, a number of technical aspects of the data should be noted.

Of particular importance is the fact that the underlying figures were gathered by different Government agencies, often utilizing different sampling techniques and different methods of classification. Thus the data on earnings and employment were obtained on an establishment basis, with each establishment assigned to a particular industry on the basis of its principal product, measured in value terms. The figures for profits, sales, stockholders' equity, and depreciation and depletion, on the other hand, were obtained by the FTC–SEC on a corporationwide basis; the data for the entire corporation were then assigned to the industrial classification on the basis of the corporation's

[1] I have received much helpful assistance from several Government agencies in the course of preparing the present study. In particular, I would like to express my appreciation to Harry Douty and Lily Mary David of the BLS Division of Wages and Industrial Relations; to Sidney Jaffe, Allan Searle, and Helen Hald of the BLS Division of Prices and Cost of Living; to Jack Alterman of the BLS Division of Productivity; to Gladys Miller, Robert Stein, and Sophia Cooper of the BLS Division of Manpower and Employment; to Hyman Lewis of the BLS Office of Labor Economics; and to Louis Paradiso of the U.S. Department of Commerce. Thomas Wilson of the staff of the Joint Economic Committee provided extensive help in the statistical computations; and Stanley Heckman and Hamilton Gewehr provided general assistance throughout.

[2] For the general discussion of the postwar inflation, see the "Staff Report on Employment, Growth, and Price Levels," ch. V. (Government Printing Office, Dec. 24, 1959).

principal product, measured in terms of annual sales volume. And finally, concentration ratios were computed from data based on the value of product shipments directly, irrespective of the establishment or corporation involved.

As a result of these differences in concept and scope, the several series are not completely comparable. To a substantial degree, however, the varying bases of classification are probably corrected by the fact that the 2-digit industry classifications used here are quite broad; consequently, they would normally embrace both the primary and the great majority of secondary products produced by any given establishment. In the case of corporatewide classification, however, there is a greater possibility that the profits figures will be overstated or understated. Classification on a product basis directly, of course, raises no serious issues.

The meaning and limitations on the use of concentration ratios also deserve some preliminary discussion. In general, concentration ratios provide a measure of the proportion of the total value of shipments or of total employment in a particular manufacturing industry which is accounted for by the largest companies in that industry. As such, they may provide a rough measure of the extent of competitive pressures existing in the product market, on the presumption that the larger the proportion of the product value which is sold by the largest firms, the greater is the "degree of monopoly" involved. There are, however, important limitations on the use of concentration ratios for this purpose. On the one hand, such ratios do not reflect the pressure of competition from substitute products, such as plastics for metals; nor do they reflect the extent to which imports may compete in the domestic market. As a result, concentration ratios may overstate the degree of monopoly in a particular situation. On the other hand, these ratios do not reflect the extent to which the relevant product market may be regional or local in character, as in the case of goods having high transportation costs. In these instances, ratios based on product value shipments for the entire country tend to understate the effective degree of concentration.[3] Nevertheless, concentration ratios can provide at least a general frame of reference for evaluating whether a particular industrial classification is "more" or "less" competitive.

II. Wage Movements in the Postwar Period

A number of statistical analyses were carried out relating the percentage changes in straight time hourly earnings in the 19 manufacturing industries with the movements of several other variables, including the percentage changes in production worker employment, output, productivity per production worker man-hour, the level of profits (as a rate of return on equity), and concentration ratios.

Some of the results of a complete year-to-year cross section analysis are summarized in table 1; in addition, a complete matrix of all possible simple correlation coefficients is shown in appendix B.[4] The simple coefficients listed in table 1 suggest several important points. Of considerable interest is the fact that no significant relationship was

[3] An excellent presentation of these and other limitations on the use of concentration ratios can be found in "Concentration in American Industry," Subcommittee on Antitrust and Monopoly, at pp. 3-6.

[4] All the regressions and correlation coefficients presented in the following discussion are single equation least squares estimates. All equations fitted were linear.

evident between the year-to-year changes in earnings and percentage changes in output, production worker employment, or productivity per production worker man-hour. On the other hand, the data indicate a strong interrelationship, particularly after 1951, between hourly earnings, profit levels, and 1954 concentration ratios. With the exception of the year 1955–56, earnings and profits were very highly correlated; the relationship of earnings to concentration ratios, while weaker, was still quite marked.

TABLE 1.—*Simple cross section correlation coefficients between wage changes and selected variables in 19 manufacturing industries, 1947–58* [1]

Year	Straight time earnings on—						Output on profits before taxes	Concentration ratios on—	
	Production worker employment	Productivity per production worker man-hour	Output	Profits before taxes	Profits after taxes	Concentration ratios		Profits before taxes	Profits after taxes
1947–48	0.417	−0.248	0.195	0.012	0.138	0.226	0.463	−0.108	0.071
1948–49	−.050	.162	.024	.616	.777	.336	.237	.447	.527
1949–50	−.563	.362	−.372	−.087	−.097	.033	.654	.307	.340
1950–51	.171	−.247	.078	.178	.127	.045	.631	.361	.371
1951–52	.087	.118	.039	.598	.707	.283	.491	.458	.463
1952–53	.249	.251	.332	.550	.689	.423	.724	.559	.537
1953–54	.203	−.279	−.067	.628	.520	.463	−.059	.553	.596
1954–55	.233	.102	.383	.514	.600	.383	.500	.447	.460
1955–56	−.197	.354	.086	.055	.146	.428	.259	.512	.603
1956–57	.230	.390	.372	.546	.544	.607	.726	.612	.755
1957–58	−.576	.049	−.440	.392	.484	.549	.222	.506	.698

[1] The 5 percent level of significance is 0.4555. The 1 percent level is 0.5751.

Sources: See apps. A and B.

The use of simple correlation techniques may, however, yield misleading results. In particular, it will be noted in table 1 that profits were often significantly, though rather sporadically, related to changes in output. In order to test the relationship between earnings and profits, after correcting for the effects of changes in output, partial correlation coefficients were computed for each year. The general conclusions indicated above were not greatly affected, although the coefficients fell to somewhat below the 5 percent level of significance in 1954–55 and 1956–57. The partial correlation coefficients, using profits before taxes as the profit variable, were as follows: [5]

1947–48	−0.009	1953–54	0.627
1948–49	.628	1954–55	.403
1949–50	.223	1955–56	.034
1950–51	.167	1956–57	.432
1951–52	.665	1957–58	.559
1952–53	.476		

Finally, two multiple cross-section regressions were computed for the subperiods 1947–53 and 1953–58, relating changes in hourly earnings to (1) the average level of profits before taxes, (2) the percent change in production worker employment, and (3) the percent change in output. The results, presented in table 2, were again consistent with the previous findings. For the earlier period, the partial correlations coefficients were not significant for any variable; for the years 1953–58,

[5] The 5 percent level of significance is 0.4683; the 1 percent level is 0.5897.

however, the coefficient for profits was significant at well above the 5 percent level, while both employment and output were of virtually no significance whatever.[6]

TABLE 2.—*Cross-section regression equations: Wages*

Independent variable	Regression coefficient	Partial correlation coefficient	Beta coefficient	Standard error of beta coefficient
1947–53:				
Average profit rate before taxes	0.7430	0.3028	0.4196	0.3409
Percent change:				
Production worker employment	−.2345	−.2009	−.4007	.5044
Output	.1329	.1787	.3798	.5398
1953–58:				
Average profit rate before taxes	[1].7498	[1].6590	.6797	.2003
Percent change:				
Production worker employment	.0034	.0046	.0049	.2759
Output	−.0526	−.1055	−.1139	.2770

Regression constants:	
1947–53	19.58
1953–58	7.28
Multiple correlation coefficient:	
1947–53	R = .4614
1953–58	R = [1].6729
Coefficient of multiple determination:	
1947–53	R^2 = .2129
1953–58	R^2 = [1].4528
Degrees of freedom	N–4=15

[1] Significant at the 5-percent level.

In addition to these cross-section tests, some time series analyses were also conducted for each two-digit classification. In view of the limited number of annual observations available, and the rather sharp structural readjustments occurring in the economy as a whole during the immediate postwar and Korean periods, the use of time series is subject to important limitations; nevertheless, the results were generally quite consistent with those indicated by the cross-section data.

Table 3 indicates, for each two-digit industry, the simple correlation coefficients between the year-to-year percentage change in straight-time hourly earnings and the percentage changes in employment and output; in addition, coefficients are given for the relationship between earnings and three different measures of profit levels. There was no important relationship evident with respect to either output or employment. In the case of profits, however, the correlations were consistently stronger, particularly for profits before taxes, lagged 1 year. In the latter instance, the correlation coefficients were at a 5-percent level of significance or better in 9 out of 19 industries, including 5 which were at a 1-percent level.

[6] Another bit of corroborative evidence can be found in a similar study of 61 smaller (3-digit) industries conducted by Conrad. On the basis of both simple and multiple cross-section regression analysis, he found a "remarkably low degree of relationship" between average annual changes in production workers' wages and output, employment, and productivity. He did not test for the role of profits. See Alfred H. Conrad, "The Share of Wages and Salaries in Manufacturing Incomes, 1947–56," Joint Economic Committee Study of Employment, Growth, and Price Levels, Study Paper No. 9, pp. 149–152.

TABLE 3.—*Simple time series correlation coefficients between annual changes in wages and selected variables, 1947–58* [1]

Industry	Percent change in straight-time hourly earnings on—				
	Percent change, production worker employment	Percent change, output	Rate of return on equity before taxes	Rate of return on equity after taxes	Rate of return on equity before taxes lagged 1 year
20. Food	0.165	−0.638	0.234	0.353	0.805
21. Tobacco	−.476	−.099	.040	.168	.017
22. Textiles	.408	.173	.848	.835	.709
23. Apparel	−.027	−.409	.236	.122	.395
24. Lumber	.252	.012	−.200	−.322	−.201
25. Furniture	−.050	−.290	.643	.533	.805
26. Paper	.049	−.344	.463	.529	.749
27. Printing	−.170	.098	.276	.712	.870
28. Chemicals	.266	−.005	.206	.178	.287
29. Petroleum	.681	.210	.706	.787	.317
30. Rubber	.283	−.063	.540	.072	.792
31. Leather	.192	−.145	.047	−.371	.439
32. Stone, clay, and glass	.381	.139	.177	.188	.173
33. Primary metals	.139	−.014	.204	−.009	.110
34. Fabricated metals	−.131	−.189	.399	.449	.712
35. Machinery, except electrical	.317	.214	.595	.525	.671
36. Electrical machinery	−.139	−.175	−.012	−.243	.617
37. Transportation equipment	.218	.128	−.302	−.307	−.301
38. Instruments	.362	.237	.157	.281	.167

[1] The 5-percent level of significance is 0.6021; the 1-percent level is 0.7348.

Source: See app. A.

This approach was carried one step further by testing for the partial effects of both lagged profits and employment changes; the results are shown in table 4. Lagged profits continued to be strongly correlated to wage changes, with coefficients above the 5-percent level in nine industries. By contrast, employment, while a more important variable than was indicated by simple correlation coefficients, still exceeded the 5-percent level in only two cases. Consequently, the same general conclusions were supported.

TABLE 4.—*Time series partial correlation coefficients between annual changes in wages, employment, and lagged profits, 1947–58* [1]

Industry	Partial correlation [2] of percent change in straight-time hourly earnings on—	
	Percent change in production worker employment	Rates of return on stockholders' equity before taxes, lagged 1 year
20. Food	0.398	0.834
21. Tobacco	−.480	−.072
22. Textiles	.675	.821
23. Apparel	−.034	.395
24. Lumber	.228	−.282
25. Furniture	.595	.879
26. Paper	.420	.798
27. Printing and publishing	−.049	.866
28. Chemicals	.213	.240
29. Petroleum	.680	.316
30. Rubber	.550	.847
31. Leather	.390	.538
32. Stone, clay, and glass	.385	.182
33. Primary metals	.186	.166
34. Fabricated metals	.050	.707
35. Machinery, except electrical	.386	.692
36. Electrical machinery	−.291	.649
37. Transportation equipment	.338	−.393
38. Instruments	.326	−.008

[1] The 5 percent level of significance is 0.6319; the 1 percent level is 0.7646.

[2] These are partial correlation coefficients corresponding to the regression coefficients in the equation $W_t = a + bE + cR$, where W_t is the percent change in straight time hourly earnings, E is the percent change in production worker employment, and R is the rate of return on stockholders' equity, lagged 1 year.

Unfortunately, no recent data were available to evaluate the possible relationship between wage changes and union strength. The most recent study of the extent of union organization in different industries was made in 1946;[7] it is probable, however, that the strength of unionism has not changed greatly in most industries since that time. In any case, on the basis of the best estimates available, there does not appear to be any general relationship between union strength and wage changes. This is suggested by the figures in table 5, in which industries are ranked in accordance with their percentage increases in earnings during two major subperiods, together with data on estimated union strength, average profit levels, concentration ratios, and production worker employment in those industries. During both of the periods 1947–53 and 1953–58, the six industries which had the greatest increases in hourly earnings ranged from quite weakly unionized sectors, such as food and chemicals, to such strongly organized industries as primary metals. Contrariwise, the half dozen industries with the lowest increases in earnings included apparel, which was highly organized, as well as textiles and leather at the other extreme. Union strength per se therefore, does not appear to have been an important factor explaining developments in the wage structure; it must be stressed, however, that it does not necessarily follow from this that collective bargaining has not had an effect on the wage level. For it may be that wages are increased in the more strongly unionized industries by more than would otherwise be the case, and that other industries, both union and nonunion, adopt the same "pattern." Thus the lack of any evident relationship between wage changes and

[7] "Extent of Collective Bargaining and Union Recognition, 1946," Monthly Labor Review, May 1947.

union strength is not sufficient to demonstrate that unionism is purely a passive factor.

TABLE 5.—*Changes in wages, profit rates, concentration ratios, union strength, and employment in manufacturing industries, 1947–53 and 1953–58*

Industry	Percent change in straight time earnings	Average profit rates, before taxes	Concentration ratios	Estimated union strength, percent	Percent change in production worker employment
	1947–53				
Chemicals	49.2	26.0	59.4	25–50	5.2
Petroleum refining	47.6	19.1	99.1	50–75	1.4
Primary metals	47.4	22.8	81.1	75–100	5.3
Food	46.0	20.2	22.4	25–50	−6.0
Paper	45.5	26.2	5.0	50–75	8.8
Printing	45.0	23.3	2.3	75–100	7.2
Instruments	44.9	24.6	69.9	50–75	17.7
Stone, clay, and glass	44.3	26.6	37.9	50–75	4.1
Lumber	44.0	24.4	1.5	25–50	−10.6
Fabricated metals	43.9	26.3	19.3	50–75	13.2
Nonelectrical machinery	43.8	26.6	31.1	75–100	7.5
All manufacturing	42.7	23.9			8.1
Furniture	41.9	26.0	7.3	25–50	6.6
Transportation equipment	40.1	33.1	83.2	75–100	47.2
Tobacco	38.6	20.0	100.0	25–50	−13.5
Electrical machinery	38.2	31.2	72.2	75–100	31.0
Rubber	37.5	25.5	51.2	75–100	0.2
Textiles	31.4	20.3	11.9	0–25	−10.8
Leather	31.1	15.5	2.3	25–50	−6.8
Apparel	18.0	13.6	5.7	75–100	7.1
	1953–58				
Primary metals	31.2	21.0	81.1	75–100	−21.2
Tobacco	28.7	24.0	100.0	25–50	−15.9
Chemicals	26.7	24.3	59.4	25–50	−7.3
Paper	26.3	19.9	5.0	50–75	−0.6
Food	25.2	17.7	22.4	25–50	−8.9
Fabricated metals	24.9	18.9	19.3	50–75	−14.5
Nonelectrical machinery	24.6	20.9	31.1	75–100	−20.2
Instruments	24.6	23.8	69.9	50–75	−15.8
Petroleum refining	24.3	14.9	99.1	50–75	−15.8
Electrical machinery	24.1	24.6	72.2	75–100	−18.9
Transportation equipment	24.1	30.7	82.3	75–100	−27.1
Rubber	23.0	22.7	51.2	75–100	−15.6
Stone, clay, and glass	22.9	24.4	37.9	50–75	−9.2
All manufacturing	21.6	20.3			−15.7
Printing	18.1	21.6	2.3	75–100	6.4
Furniture	16.1	18.7	7.3	25–50	−7.1
Lumber	15.9	14.0	1.5	25–50	−20.2
Leather	14.9	15.6	2.3	25–50	−8.4
Apparel	13.7	12.8	5.7	75–100	−6.9
Textiles	9.7	9.2	11.9	0–25	−22.0

Sources: See app. A.

WAGE PATTERNS IN THE POSTWAR PERIOD

The general forces underlying wage changes, as developed in the preceding section, are also given support by an analysis of the collective bargaining settlements negotiated in several manufacturing industries, or in companies generally representative of entire industries, during the postwar period. These settlements are summarized in table 6 for each year and for major subperiods. For purposes of analysis, they are separated into two broad groups according to the general degree of concentration in the industries involved. In addition, the "key" bargains are designated for each period.[8]

[8] The term "key" bargain is used here to designate the collective agreement which is widely alleged to establish a standard, or "pattern," of wage-fringe adjustments which is accepted by other industries or companies as the basis for subsequent agreements. The steel and automobile settlements are usually given this status because of their size and the strength of the union in them, even though other settlements may, in point of time, precede them.

TABLE 6.—*Wage-fringe adjustments in selected manufacturing industries, 1946–58*

Company or industry	Total settlements, 1946–50
High concentration:	
United States Steel (key)	62½ cents plus noncontributory pensions, plus contributory insurance.
General Motors (key)	56 cents plus 6 holidays plus noncontributory pensions, plus contributory insurance (includes 11-cent automatic increase).
International Harvester	53½ cents plus 6 holidays plus noncontributory pensions, plus contributory insurance (includes 3-cent automatic increase).
Rubber (4 companies)	52½ cents plus 6 holidays, plus noncontributory pensions, plus contributory insurance.
General Electric	52 cents plus 7 holidays, plus contributory pensions, plus contributory insurance.
Armour	55½ cents plus 6 holidays.
Aluminum Co. (steelworkers)	58 cents plus 6 holidays, plus noncontributory pensions, plus noncontributory insurance.
Anaconda Copper	57 cents plus 6 holidays, plus contributory insurance.
Lockheed Aircraft	50 cents plus noncontributory insurance (6 holidays, plus noncontributory pensions previously in effect).
Glenn Martin	43 cents plus 7 holidays, plus contributory insurance.
North American Aviation	47½ cents plus 6 holidays (contributory insurance previously in effect.
Bethlehem Shipbuilding	37 cents plus noncontributory pensions, plus contributory insurance.
Pacific Shipbuilding	47 cents (new construction).
Sinclair Oil	79 cents (includes 25 cents negotiated in 1945) plus contributory insurance (6 holidays plus contributory pensions previously in effect).
American Viscose	55 cents plus 6 holidays, plus contributory pensions (noncontributory insurance previously in effect).
Low concentration:	
Full Fashioned Hosiery	46 cents plus 5 holidays, plus noncontributory pensions (noncontributory insurance previously in effect).
Northern Cotton Textiles	54 cents plus 6 holidays (noncontributory insurance previously in effect).
American Woolen	57 cents plus 6 holidays (noncontributory insurance previously in effect).
Men's Clothing	52½ cents (6 holidays, plus noncontributory pensions, plus noncontributory insurance previously in effect).
Women's Clothing	56 cents (6½ holidays for time workers, plus noncontributory pensions, plus noncontributory insurance previously in effect).
International Shoe	42 cents plus 6 holidays.
Massachusetts Shoe	42½ cents plus 6 holidays (noncontributory insurance previously in effect).

Company or industry	Total settlements, 1951–54
High concentration:	
United States Steel (key)	29¼ cents plus 6 holidays.
General Motors (key)	32 cents (includes 31-cent automatic increase).
International Harvester	28 cents (all automatic).
Rubber (4 companies)	32 cents.
General Electric	33 cents (estimated; includes 9-cent automatic increase).
Armour	31½ cents plus noncontributory pensions, plus noncontributory insurance.
Aluminum Co. (steelworkers)	35½ cents (estimated).
Anaconda Copper	33 cents plus noncontributory pensions.
Lockheed Aircraft	36 cents (includes 3-cent automatic increase).
Glenn Martin	43½ cents plus noncontributory pensions (includes 24-cent automatic increase).
North American Aviation	38½ cents plus noncontributory pensions (includes 15-cent automatic increase).
Bethlehem Shipbuilding	52½ cents plus 6 holidays.
Pacific Shipbuilding	55 cents (new construction) plus noncontributory insurance.
Sinclair Oil	31½ cents plus 1 holiday (estimated; includes 3-cent automatic increase).
American Viscose	15 cents (includes 11-cent automatic increase).
Low concentration:	
Full Fashioned Hosiery	25 percent reduction in rates (estimated).
Northern Cotton Textiles	4 cents (includes 3-cent automatic increase).
American Woolen	4 cents.
Men's clothing	12½ cents.
Women's clothing	14 cents.
International Shoe	10½ cents plus noncontributory insurance.
Massachusetts Shoe	8 cents plus ½ holiday.

TABLE 6.—*Wage-fringe adjustments in selected manufacturing industries, 1946–58*—Continued

Company or industry	Total settlements, 1955–58
High concentration:	
United States Steel (key)	59½ cents plus SUB [1] plan, plus 1 holiday (includes 34-cent automatic increase).
General Motors (key)	47½ cents plus SUB plan, plus 1 holiday (includes 31-cent automatic increase).
International Harvester	49 cents plus SUB plan, plus 1 holiday (includes 32-cent automatic increase).
Rubber (4 companies)	43 cents plus SUB plan, plus 1 holiday.
General Electric	40 cents (estimated; includes 37-cent automatic increase).
Armour	54 cents (includes 28-cent automatic increase).
Aluminum Co. (steelworkers)	63 cents plus SUB plan, plus 1 holiday (includes 36-cent automatic increase).
Anaconda Copper	37 cents plus 1 holiday (includes 14-cent automatic increase).
Lockheed Aircraft	39 cents plus 1 holiday (estimated; includes 1-cent automatic increase).
Glenn Martin	41 cents (estimated; includes 38-cent automatic increase).
North American Aviation	36 cents plus 1 holiday (includes 19-cent automatic increase).
Bethlehem Shipbuilding	66 cents plus 1 holiday.
Pacific Shipbuilding	51 cents plus 6 holidays.
Sinclair Oil	41½ cents (estimated) plus 1 holiday.
American Viscose	13½ cents (includes 8½-cent automatic increase).
Low concentration:	
Full Fashioned Hosiery	Association bargaining discontinued after 1954.
Northern cotton textiles (Berkshire-Hathaway).	7½ cents.[2]
American Woolen	Out of business after 1954.
Men's clothing	12½ cents plus 1 holiday.
Women's clothing	14 cents.
International Shoe	14½ cents plus noncontributory pensions.
Massachusetts Shoe	18 cents plus ½ holiday.

[1] SUB=Supplementary unemployment benefit.
[2] Association bargaining discontinued after 1954. The Berkshire-Hathaway Co. was substituted because it had been a major concern in the previous association.

Source: Wage Chronology Series, Bureau of Labor Statistics and data published by the Bureau of National Affairs. Some added information was obtained from personal correspondence.

Two important characteristics of postwar wage patterns can be noted from the table. First, the general level of settlements during the period 1946–50 were very similar for the great majority of firms and industries covered; in particular, no important differences were evident as between the high versus the low concentration sectors. During this period, five separate rounds of wage-fringe increases occurred. With few exceptions, manufacturing industries or companies, regardless of their product market characteristics, followed similar patterns. In the few instances of substantial downward modification of the pattern, as in aircraft and shipbuilding, the differences were made up in the 1951–54 period.

Beginning in 1951, however, very substantial deviations began to develop, primarily in line with the competitive characteristics of the industry. In the nonconcentrated sectors—textiles, clothing, and leather (shoes)—settlements fell very far below the pattern. In addition, the one company in the concentrated sector which fell below—American Viscose, manufacturers of rayon yarn—was subject to severe competition from the development of other synthetic fibers. In effect, those manufacturing industries which were subject to increasing competitive pressures in the product market and in which profits were being seriously curtailed, did not match the pattern established by the more profitable, and in most cases more concentrated, industries.

This general situation continued through 1955–58. The textile and clothing industries, including American Viscose, and the shoe firms continued to reach agreements far below the level set in the better situated industries. Within the latter, more diversification also developed, although the bulk of settlements ranged between 40 and 50 cents per hour. The major exceptions were in industries organized by the steel union—steel, aluminum, and Atlantic coast shipbuilding (Bethlehem Steel Co.); in these sectors, wage increases were 59½, 63, and 66 cents, respectively (plus fringes), over the 4-year period.

The second point to be noted from the data is the increasing importance of automatic wage changes, incorporated into long-term contracts in the form of cost-of-living adjustments and annual improvement factors. During the 1946–50 period, this approach was introduced by General Motors, but was rarely followed elsewhere. In 1951–54, however, largely as a result of the sharp rise in the cost of living which accompanied the outbreak of the Korean war in 1950, the annual improvement factor-cost of living approach was adopted in automobiles, farm equipment, aircraft, electrical equipment, and a few others. The steel union, however, continued to follow the more traditional approach, as did several other leading companies and unions.

During 1955–58, however, most of the latter group also went over to automatic adjustments. As a result, virtually every strongly unionized company in the concentrated sectors listed in table 6 had negotiated long-term contracts in 1955 and 1956, providing for automatic annual wage increases plus automatic costs-of-living adjustments through 1957, 1958, and, in some cases, 1959. The only exceptions were rubber, shipbuilding, and oil (Sinclair). On the other hand, none of the low concentration sectors followed this policy after 1955.

The sequence of wage developments during the 1955–58 period is also of very considerable interest. In the summer of 1955, the major "key" bargain was negotiated in the automobile industry, in which sales and profits were at record or near record levels. The contract extended for 3 years to mid-1958, and included an annual improvement factor of approximately 6 cents per hour, a cost-of-living clause, and additional fringes estimated to be worth approximately 12 cents per hour. Shortly thereafter, the steel industry negotiated a straight wage increase of 15 cents, under a wage reopener clause, in a contract which expired in 1956. Output and profits in steel had also risen sharply from the 1954 recession low; the relevant data for both the automobile and steel industries are shown in table 7. Before the year was out, the leading firms in several other major industries in which market conditions and profits were adequate had negotiated similar contracts, with many adopting the 3-year approach of the automobile industry.

TABLE 7.—*Basic trends in the steel and automobile industries, 1947–58*

Year	Profits before taxes on equity (percent)	Profits after taxes on equity (percent)	Profits before taxes as percent of sales	Output (1947–49=100)	Production worker employment (1947–49=100)
IRON AND STEEL					
1947	19.8	12.1	10.9	101	101
1948	17.0	14.7	12.3	106	105
1949	17.0	9.9	10.9	92	93
1950	28.1	14.2	15.1	118	104
1951	34.0	12.3	16.0	131	110
1952	17.6	8.5	9.3	117	95
1953	25.5	10.7	12.4	130	110
1954	16.0	8.1	10.5	109	97
1955	27.1	13.5	14.5	146	107
1956	25.1	12.7	12.9	143	104
1957	22.7	11.4	13.0	139	103
1958	14.2	7.2	10.5	105	86
MOTOR VEHICLES					
1947	27.9	15.6	10.4	95	100
1948	32.9	18.7	11.8	101	101
1949	35.8	20.9	13.2	104	98
1950	51.8	24.6	17.1	132	109
1951	39.5	14.1	13.2	120	110
1952	30.8	13.6	12.6	102	100
1953	37.9	13.6	11.0	126	119
1954	29.4	13.9	10.8	109	97
1955	46.1	21.1	15.1	153	116
1956	27.1	13.0	10.8	125	100
1957	28.1	14.0	10.8	128	98
1958	14.4	8.1	7.0	99	74

Sources: See app. A. The output index for "Iron and Steel" is the Federal Reserve Board index of industrial production, with 1947 weights.

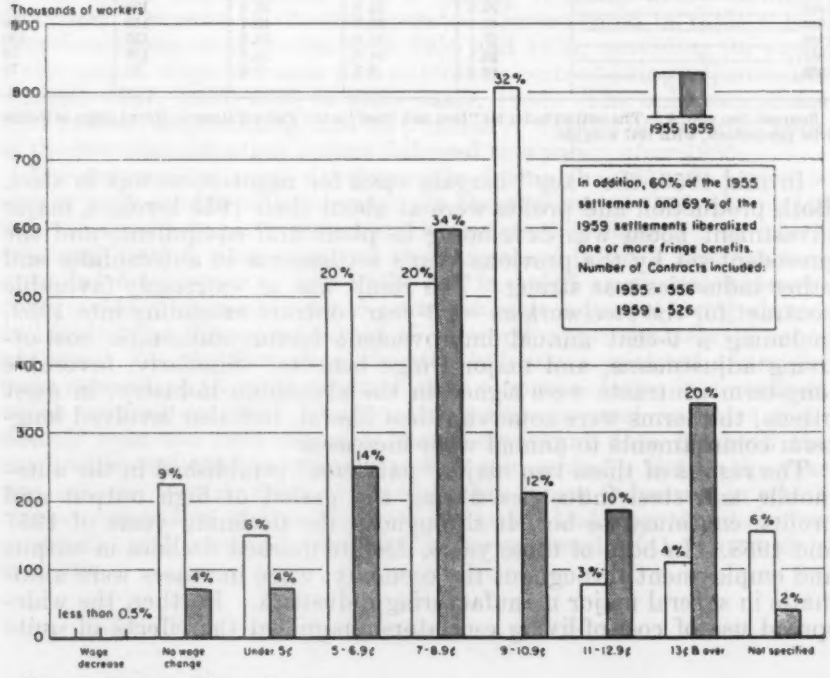
In mid-1956, the "key" bargain open for negotiation was in steel. Both production and profits were at about their 1955 levels, a major investment boom was developing in plant and equipment, and the precedent set by the previous year's settlements in automobiles and other industries was strong. The result was an extremely favorable contract for the steelworkers—a 3-year contract extending into 1959, including a 9-cent annual improvement factor, automatic cost-of-living adjustments, and major fringe benefits. Similarly, favorable long-term contracts were signed in the aluminum industry; in most others, the terms were somewhat less liberal, but also involved long-term commitments to annual wage increases.

The results of these two major "patterns," established in the automobile and steel industries during the period of high output and profits, continued to be felt throughout the declining years of 1957 and 1958. In both of these years, despite marked declines in output and employment throughout the economy, wage increases were automatic in several major manufacturing industries. Further, the widespread use of cost-of-living escalators magnified the effects of quite

small (originating) increases in the Consumer Price Index. The automobile contract, which terminated in the midst of the sharp recession of 1958, was again renewed for a 3-year period, and again included an automatic annual improvement factor of 2½ percent per year (about 7 cents) plus cost-of-living adjustments. Thus the recession did not appear to have had any appreciable effect on the annual rate of increase in negotiated rates; the direct costs of additional fringe benefits negotiated in the 1958 automobile contract, however, were very low. And in 1959, the steel contract was again being negotiated in the context of a developing boom.

The probability that the rate of increase in wages after 1958 has not been appreciably affected by the 3-year automobile contract is given added support by a comparison of the wage-fringe increases negotiated during the first 6 months of 1959 as compared to the same period in 1955. These periods were generally comparable, since they both represented approximately the same phase of sharp recovery from previous recessions. From December 1954 to June 1955, unemployment declined from 5.0 to 4.1 percent, seasonally adjusted; in the same period, December 1958 to June 1959, the rate fell from 6.1 to 4.9 percent.

NEGOTIATED SETTLEMENTS, FIRST SIX MONTHS 1955 AND 1959



Source: Bureau of Labor Statistics.

The above chart relates to settlements involving 1,000 or more workers concluded during the 6-month period. It includes all wage changes negotiated during the January–June period that are scheduled to go into effect during the contract year—i.e., the 12-month period following the effective date of the agreement. In summarizing percentage increases, it has been necessary to estimate

their value in terms of cents on the basis of available information on wage levels in the industry.

This chart excludes—

Settlements involving fewer than 1,000 workers.

Settlements in construction, the service trades, finance, and government.

Instances in which contract reopening privileges were not exercised.

Wage increases and changes in supplementary practices that went into effect during the period but that were negotiated earlier—for example, deferred wage increases, cost-of-living adjustments, or annual improvement factor increases.

Chart 1 provides a comparison of the number of employees covered by negotiated contracts who received wage increases within specified ranges in the first 6 months of 1955 and 1959. In 1955, 72 percent of employees received wage increases of 5 to 11 cents, compared to only 60 percent in early 1959. However, a full 30 percent received more than 11 cents in 1959, contrasted to only 8 percent in 1955; contrariwise, 15 percent received less than 5 cents in 1955 compared to 8 percent in 1959. An estimate of the weighted average of wage increases for 1955 was 7.6 cents; in 1959, 9.2 cents. This increase of about 20 percent approximates the rise in hourly earnings from 1955 to 1959; relatively, therefore, the 1959 increase was no greater than 1955. On the other hand, the rate of unemployment was almost one percentage point greater in the first 6 months of 1959 as compared to 1955. And finally, 69 percent of the 1959 settlements also liberalized one or more fringe benefits as contrasted to 60 percent in the first 6 months of 1955, although the costs of the 1959 fringes may well have been below those of 1955. The weight of evidence, however, indicates that the rate of advance in wage-fringe costs has not been slower during the 1959 upswing.

One final possible qualification should be noted. The data on which these comparisons are based excludes contracts which contained reopening clauses that were not utilized—that is, contracts in which no increases occurred because the union chose not to request one. They also exclude several types of settlements noted in the chart. It is doubtful that this would affect the data in any important way.

III. The Movement of Manufacturing Prices

An analysis similar to that applied to wage movements was also carried out for price movements in 16 two-digit manufacturing industries. Since the Bureau of Labor Statistics does not compute wholesale price indexes on a basis consistent with most two-digit classifications, it was necessary to construct such indexes by recombining various subgroups of the wholesale price index. The sources and methods used are described in appendix A. The resulting price indexes are shown in table 8 [9]; in all, they account for close to 80 percent of the weights in the entire wholesale price index, and for approximately 95 percent of the total weight in the "all manufactures" index. The major additional items included in the entire wholesale price index are, of course, farm products.

[9] Only 16 industrial sectors are represented because of lack of adequate price data for the remaining 3—printing and publishing, transportation equipment, and instruments. Wherever feasible in the following discussion, price and other data for the three-digit industry, motor vehicles, is used in place of transportation equipment. All of the statistical tests, however, are based only upon the 16 two-digit sectors.

TABLE 8.—*Wholesale price indexes in manufacturing industries, 1947–58* [1]

[1947–49=100]

Industry	1954 weight	1947	1948	1949	1950	1951	1952	1953	1954	1955	1956	1957	1958	Percent increase
Primary metals	7.13	90.4	102.8	106.8	111.7	123.8	125.1	132.3	136.1	145.0	157.8	163.0	164.2	81.6
Nonelectrical machinery	7.82	92.4	101.1	106.6	110.2	122.5	123.1	125.7	127.8	133.3	144.2	153.5	157.1	70.0
Stone, clay, glass	2.15	92.7	101.1	105.5	109.3	117.3	118.1	123.6	127.4	131.5	139.0	144.7	149.5	61.3
Fabricated metals	5.28	90.8	102.5	106.7	110.4	121.6	120.6	122.4	124.0	127.8	136.0	141.8	142.6	57.0
Motor vehicles and equipment [2]	5.55	91.3	100.8	107.9	107.2	112.9	119.6	118.9	119.3	122.9	129.8	135.4	139.7	53.0
Rubber products	1.35	98.0	101.8	100.2	112.0	132.5	128.4	125.7	127.7	140.2	145.6	146.5	148.2	51.2
Electrical machinery	7.11	96.3	101.5	102.2	103.7	116.2	117.0	120.4	120.3	123.4	133.2	139.7	140.7	46.1
Furniture	1.30	95.3	102.3	102.3	106.5	118.7	115.9	117.1	117.2	119.2	125.6	130.6	132.1	38.6
Tobacco products	.97	95.6	99.6	104.9	107.0	110.4	111.3	119.1	120.7	120.8	121.0	126.4	131.0	37.0
Paper and allied	5.17	98.6	102.9	98.5	100.9	119.6	116.5	116.1	116.3	119.3	127.2	129.6	131.0	32.9
All manufacturing	82.95	95.9	103.8	100.3	104.1	115.5	112.9	112.8	113.7	115.0	119.5	123.2	124.5	29.8
Petroleum products	4.24	89.6	112.1	98.3	111.0	109.4	111.2	111.9	109.0	111.2	117.5	125.8	114.8	28.1
Lumber products	2.97	93.7	107.2	99.2	113.9	123.9	120.3	120.2	118.0	123.6	125.4	119.0	117.7	25.6
Food products	12.73	98.2	106.1	95.7	99.8	111.4	108.8	104.6	105.3	101.7	101.7	105.6	110.9	12.9
Leather products	1.27	99.5	102.1	98.4	104.9	120.5	103.8	104.3	101.6	101.4	107.4	108.0	109.0	9.5
Chemicals	5.83	101.4	103.8	94.8	96.3	110.0	104.5	103.6	107.0	106.6	107.2	109.5	110.4	8.9
Apparel	3.22	100.7	103.2	96.1	96.7	104.4	101.2	100.6	100.1	100.3	101.7	101.3	101.6	.9
Textile products	3.18	99.2	105.9	94.9	101.2	115.9	98.9	95.4	91.8	92.2	91.7	91.5	88.0	−11.3

[1] Printing and publishing, transportation equipment, and instruments are omitted because of lack of data.
[2] Motor vehicles and equipment is included in place of transportation equipment.

Sources: See app. A.

A complete year-to-year cross-section analysis, relating the percentage change in price to several variables, was conducted. The simple correlation coefficients for several of the more important possible relationships are listed in table 9. In addition, the complete matrix of all possible simple correlation coefficients is provided in appendix B.

TABLE 9.—*Simple cross-section correlation coefficients between price changes and selected variables in 16 manufacturing industries, 1947–58* [1]

Year	Percentage change in wholesale price index on—					
	Gross hourly earnings	Productivity per production worker man-hour	Output	Average profits before taxes	Average profits after taxes	Concentration ratios
1947–48	0.093	0.024	0.375	0.339	0.560	0.329
1948–49	.214	.328	−.416	.439	.335	.287
1949–50	−.055	.170	.073	−.041	.113	−.019
1950–51	.101	−.415	−.199	.294	−.066	−.526
1951–52	.375	.035	−.065	.536	.624	.581
1952–53	.546	−.171	.176	.490	.432	.595
1953–54	.620	−.215	−.247	.715	.505	.387
1954–55	.551	−.201	.587	.448	.395	.196
1955–56	−.098	−.418	.283	.404	.442	.193
1956–57	.551	−.100	.397	.585	.711	.617
1957–58	.308	.329	.115	.629	.276	−.114

[1] The 5-percent level of significance is 0.4973. The 1-percent level is 0.6226.

Source: See apps. A and B.

A number of interesting points are indicated. Perhaps of greatest importance is the lack of any evident relationship between changes in prices and changes in output, at least up to 1954. After 1954, the correlation became weakly positive, except for the one year of sharp recovery, 1954–55, when a significant relationship appeared.

The remaining findings may be briefly summarized as follows:

1. Changes in prices were not strongly related to changes in productivity per production worker man-hour. It is of some interest, however, that several negative correlations appeared, indicating that lower price increases were often associated with greater increases in productivity.

2. Price changes were unrelated to changes in gross hourly earnings during the early part of the period up to 1951–52. After that point, however, the correlation became very much stronger.

3. Price adjustments were clearly related to profit levels throughout most of the postwar period; the relationship was strongest, however, after 1951.

4. The relationship of price changes to concentration ratios was quite irregular. Up to 1951, it was low or negative; in fact, the strong negative correlation in 1950–51 suggests that prices in nonconcentrated industries rose more than in concentrated. From 1951 to 1957, however, the coefficient was consistently positive, though the strength of the relationship varied considerably. And finally, the correlation became weakly negative in the 1957–58 recession.[10]

[10] The first three of these results, relating to output, productivity, and earnings, were also found by Conrad, op. cit. Using both simple and multiple regression analysis to test price changes against changes in wages, output, productivity, and employment, he concluded that "only the price-wage relationship and the price-employment change relationship approach economic significance"; his data show a much lower partial correlation coefficient for the latter relationship, however. His analysis included 61 three-digit industries.

A closer evaluation of the relationship of prices to output and wages was obtained by a multiple cross-section regression analysis covering the two subperiods 1947–53 and 1953–58. The percentage change in the wholesale price index was tested against (1) the percentage change in output and (2) the percentage change in direct labor costs per unit of output per total worker man-hour. The latter variable thus takes account of the effects of productivity on labor costs as well. The results are shown in table 10. Output was not a significant variable during either subperiod (after taking account of changes in unit direct labor costs); on the other hand, direct labor costs were highly correlated with price changes during the 1953–58 period, but much less strongly so from 1947 to 1953. In general, these findings are consistent with those indicated by the simple correlation analysis.

TABLE 10.—*Cross-section regression equations: Prices*

Independent variable	Regression coefficient	Partial correlation coefficient	Beta coefficient	Standard error of beta coefficient
1947–53:				
Percent change:				
Output	0.1891	0.2516	0.2365	0.2522
Direct labor costs per unit of output per total worker man-hour	.4982	.3730	.3661	.2522
1953–58:				
Percent change:				
Output	.2395	.3681	.3261	.2284
Direct labor costs per unit of output per total worker man-hour	[1].9367	[1].7630	.9724	.2284

Regression constants:	
1947–53	6.84
1953–58	3.76
Multiple correlation coefficient:	
1947–53	R = .4209
1953–58	R =[1].7916
Coefficient of multiple determination:	
1947–53	R^2= .1772
1953–58	R^2=[1].6266
Degrees of freedom	N–3=13

[1] Significant at the 5 percent level.

Similar relationships were shown by time series analyses, although the small number of observations and the major structural shifts which occurred in the economy during the 1947–58 period limit the usefulness of time series for this purpose. In table 11, the simple correlation coefficients are given for each two-digit industry, indicating the relationship between price changes and several other variables from 1947 to 1958. Table 12 summarizes the results of a multiple regression analysis, relating the percent change in prices to (1) the percent change in output, and (2) the percent change in gross hourly earnings. In both cases, the price-output relationship was very weak, while the price-gross hourly wage relationship was strong. In 8 of the 16 industries, the price-wage correlation was significant at the 5-percent level; in 2 more, it was close to that level of significance. In addition, the simple correlation coefficients between price changes and profit levels were at or close to 5-percent significance level in nine industries. Thus the time series data tend to corroborate the general results of the cross-section analysis.

TABLE 11.—*Simple time series correlation coefficients between annual changes in prices and selected variables, 1947–58* [1]

Industry	Percent change in wholesale price index on—			
	Percent change: Gross hourly earnings	Percent change: Ouptut	Percent change: Productivity per production worker man-hour	Rate of return on equity, before taxes
20. Food	0.490	−0.287	−0.517	0.152
21. Tobacco	.132	−.117	.270	.031
22. Textiles	.651	.413	−.083	.608
23. Apparel	.816	−.028	−.232	.126
24. Lumber	−.187	.780	.213	.914
25. Furniture	.655	−.065	−.414	.655
26. Paper	.497	.275	−.065	.771
28. Chemicals	.378	.357	−.145	.599
29. Petroleum	.565	.587	.476	.685
30. Rubber	.245	.543	−.562	.724
31. Leather	.574	−.318	−.270	−.016
32. Stone, clay, and glass	.826	.265	−.093	.228
33. Primary metals	.692	.442	.062	.675
34. Fabricated metals	.755	.159	−.053	.620
35. Machinery, except electrical	.727	.419	−.545	.495
36. Electrical machinery	.652	.236	−.498	.280

[1] The 5 percent level of significance is 0.6021· the 1 percent level is 0.7348.

Sources: See app. A.

TABLE 12.—*Time series partial correlation coefficients between annual changes in prices, output, and hourly earnings, 1947–58* [1]

Industry	Partial correlation [2] of percent change in price on—	
	Change in output	Change in gross hourly earnings
20. Food	−0.037	0.416
21. Tobacco	−.114	.129
22. Textiles	.290	.604
23. Apparel	.202	.825
24. Lumber	.807	−.375
25. Furniture	−.006	.653
26. Paper	.331	.523
28. Chemicals	.319	.342
29. Petroleum	.534	.508
30. Rubber	.501	.027
31. Leather	−.277	.558
32. Stone, clay, and glass	−.081	.813
33. Primary metals	.238	.623
34. Fabricated metals	−.108	.751
35. Machinery, except electrical	−.138	.663
36. Electrical machinery	.276	.661

[1] The 5 percent level of significance is 0.6319; the 1 percent level is 0.7646.

[2] These are partial correlation coefficients corresponding to the regression coefficients in the equation $P=a+bO+cW_G$, where P is the percent change in wholesale price, O is the percent change in output, and W_G is the percent change in gross hourly earnings.

TRENDS IN SPECIFIC MANUFACTURING INDUSTRIES

On the basis of the data on prices, wages, productivity, and profits, indexes were computed for each two-digit industry for which data were available, reflecting trends in the wholesale price index, direct labor costs per unit of output per total worker man-hour, and returns to capital (profits before taxes plus depreciation and depletion charges) per dollar of sales. These indexes are described in appendix A. In order to compare the movements of each of these variables both within each industry and among industries, ratios were computed to show the trends of each variable in each two-digit industry *relative*

to the trend in manufacturing as a whole. The resulting ratios are included in appendix C.

While these indexes are probably indicative of general trends in manufacturing industries, their limitations should be carefully noted. It has already been pointed out that the scope and method of classifying these various series differ, depending largely upon the nature and availability of the data involved. Thus profits are on a corporate basis, earnings, employment, and output are on an establishment basis, and prices on a product basis. In addition, the series included are not exhaustive, i.e., they do not reflect all the costs (including profits) which go to make up the final price. In particular, no data are available on the costs of materials; also, indirect taxes may be an important element of price in a few instances, as in tobacco products. Finally, the indexes of direct labor costs per unit of output very probably understate the actual rate of increase in labor costs, since they are based on the trend in gross hourly earnings of production workers only; no figures are available to show average hourly labor costs of both production and nonproduction workers. The resulting indexes probably understate the rate of increase in labor costs because (1) the rate of increase of employment of nonproduction workers has considerably exceeded that of production workers; in fact, the total number of production workers employed in manufacturing in 1958 was considerably lower than in 1947, whereas employment of nonproduction workers had risen by over 50 percent, and (2) because the average level of hourly compensation for nonproduction workers very probably exceeded the average hourly earnings of production workers. Thus, the shift in "employee mix" would result in a greater rate of increase in labor costs than would be reflected in the trend of earnings for production workers alone.

Since the following data is presented in terms of basic trends relative to manufacturing as a whole, some preliminary discussion of the underlying movement of prices, costs, and profits in all manufacturing may be helpful. These figures are presented in table 13. It is clear that the manufacturing price level has risen steadily since 1947, with the exception of a fairly substantial reduction of 3.2 percent in the 1949 recession and a smaller downward readjustment after the sharp speculative rise which accompanied the outbreak of the Korean war in mid-1951.

TABLE 13.—*Basic trends in manufacturing, 1947–58*

[1947–49=100]

Year	Wholesale price index: All manufactures	Direct labor costs per unit of output	Profits plus depreciation and depletion as percent of sales	Materials and components for manufacturing	Production worker employment	Nonproduction worker employment
1947	95.9	96.3	102.3	96.4	103.4	97.4
1948	103.8	101.6	105.0	104.0	102.8	101.8
1949	100.3	101.6	92.7	99.6	93.8	100.8
1950	104.1	99.8	119.0	104.5	99.6	103.5
1951	115.5	109.2	114.6	118.4	106.4	115.2
1952	112.9	111.6	99.7	113.4	106.3	124.6
1953	112.8	114.6	100.6	115.2	111.8	133.0
1954	113.7	114.5	98.0	115.4	101.8	133.0
1955	115.0	112.1	112.8	118.2	105.6	136.8
1956	119.5	115.8	109.3	123.7	106.7	144.8
1957	123.2	118.8	102.3	126.9	104.4	151.2
1958	124.5	120.4	92.7	127.2	94.2	148.8

Sources: See app. A. The "Materials and components" index is from the Economic Report of the President, January 1959, p. 198.

SOURCES AND LIMITATIONS OF DATA

During the early part of this period from 1947 to 1950, labor costs and profits all rose considerably. From 1950 to 1954, profit margins declined, then again rose sharply with the strong recovery of 1955. During the subsequent period to 1957, they declined moderately, then fell considerably in the 1958 recession. By the end of the period (1956–58), the proportion of the sales dollar going into profits plus depreciation and depletion was at approximately the same level as in 1947–49. The pattern of movement, however, has been for gross margins to rise sharply at the beginning of boom periods and to recede gradually during the subsequent years of "leveling off."

The index of direct labor costs per unit of output has shown a continuing upward trend over the period, except for relatively small declines in 1950 and 1955, undoubtedly reflecting the increase in productivity which normally accompanies a strong upswing in output.[11] Table 13 also shows the very considerable shift in employment toward nonproduction workers. It has already been noted that one probable result of this shift in employment patterns has been to raise the rate of increase in total labor costs per unit faster than is reflected in the index of unit direct labor costs. An additional implication of the rising importance of nonproduction worker employment is the fact that labor costs have become less responsive to cutbacks in production during recessions; this is clearly shown by the very much greater cutbacks in production worker than in nonproduction worker employment during the recessions of 1949, 1954, and 1958. By the same token, as Schultze has pointed out, one major reason for the rapid rise in labor costs per unit from 1955 to 1957 was the more than 10 percent increase in nonproduction worker employment as contrasted to the rise of only 3.5 percent in manufacturing production; the result, of course, was to hold down the rate of increase in productivity per total worker man-hour.[12] One must presume, however, that in the long run, producers expect the shift in employee-mix to represent a profitable choice; in the 1955–58 period, however, it probably had a considerable adverse effect on unit labor costs and profit margins.

The data included in appendix C provide a basis for comparing the general trends of prices, wages, profits, and other variables over time, both within and between industries. In table 14, ratios of the specific industry indexes to the index of all manufacturing are shown for several important variables, as of 1957.[13] The year 1957 is used in order to avoid the effects on the data of the 1958 recession. For purposes of analysis, the industries have also been classified according to the extent of concentration and the strength of unionization in each. It should be stressed, however, that these trends cannot be considered as anything more than suggestive; considerably more detailed studies would be required within each sector before a more

[11] It must be stressed here that the trend indicated by the index of profits margins cannot be meaningfully compared to the trend indicated by the index of labor costs per unit of output, since the basis of computing the indexes is quite different. The index of profit margins is a measure of profits deflated by sales. The index of labor costs per unit, on the other hand, is a measure of direct labor costs deflated by man-hour productivity. The profits index reflects a percentage, whereas the labor cost index reflects an absolute amount.

[12] See Charles L. Schultze, "Recent Inflation in the United States," Joint Economic Committee Study of Employment, Growth, and Price Levels, Study Paper No. 1.

[13] It should be noted that we are here comparing the ratios of indexes, rather than the indexes of each variable directly. Thus the problem cited in footnote 11 does not arise.

firm evaluation of the role of concentration and unionization can be made.

TABLE 14.—*Ratio of indexes in specific industries relative to all manufacturing, 1957*

[1947–49 ratio=100]

Industry	Wholesale price	Output	Straight time hourly earnings	Labor costs per unit of output	Returns to capital	Concentration ratios (percent)	Estimated union strength (percent)
All manufacturing	100	100	100	100	100	100	100
Highly concentrated, strongly unionized industries:							
Primary metals	132	90	107	119	113	81	75–100
Rubber	119	91	99	107	109	51	75–100
Stone, clay, and glass	118	99	102	103	117	38	50– 75
Electrical machinery	113	135	98	94	92	72	75–100
Motor vehicles	110	87	98	N.A.	100	96	75–100
Petroleum	102	96	102	100	91	99	50– 75
Highly concentrated, weakly unionized industries:							
Tobacco	103	79	104	98	139	100	25– 50
Chemicals	89	137	107	87	121	39	25– 50
Low concentration, strongly unionized industries:							
Nonelectrical machinery	125	93	102	119	96	31	75–100
Fabricated metals	115	92	102	122	74	19	50– 75
Paper	105	107	103	106	83	5	50– 75
Apparel	83	82	82	95	83	8	75–100
Low concentration, weakly unionized industries:							
Furniture	106	96	96	99	77	7	25– 50
Lumber	97	75	96	91	58	2	25– 50
Leather	88	78	90	96	102	2	25– 50
Food	86	83	104	107	90	22	25– 50
Textiles	74	73	85	81	52	12	0– 25

Source: App. C.

Nevertheless, at least some tentative observations may be made with respect to these figures. Perhaps the most striking are the trends in the primary metals industry. From 1947 to 1957, the wholesale price index rose to a level almost one-third higher than the price index for all manufacturing. Direct labor costs per unit rose by nearly 20 percent more, and returns to capital by 13 percent more than in all manufacturing. Yet these strong upward movements in relative prices, wages, and profit margins developed during a period in which output rose by considerably less than in manufacturing as a whole.[14]

Among the remaining industries within the highly concentrated, strongly unionized group, no similar clear trends are evident. In general, their price indexes rose by more than the average; this was not consistently related, however, to the movement of hourly earnings, labor costs, or returns to capital. Straight-time hourly earnings increased in all of these sectors by almost exactly the same amount as in manufacturing as a whole. In rubber and stone, clay, and glass, however, labor costs and capital returns both rose more than all manufacturing average; in electrical machinery and petroleum, on the other hand, the opposite was generally the case.

The two industries characterized by high concentration and weak union organization—tobacco and chemicals—reveal some interesting trends. In each of them, hourly earnings rose by more than the manu-

[14] For a much more comprehensive analysis of these trends and the causal factors underlying them, see Otto Eckstein and Gary Fromm, "Steel and the Postwar Inflation", Joint Economic Committee Study of Employment, Growth, and Price Levels Study Paper No. 2.

facturing average; productivity also increased sufficiently, however, that labor costs per unit rose by less than the average, particularly in chemicals. Also, the wholesale price index in these two sectors showed no significant relative upward movement (chemicals dropped considerably, in relative terms). The most striking figure which emerges, however, is the very considerable rise in total returns to capital; in both industries, these margins rose by very much more than in all manufacturing and by considerably more than any other individual sector.

Among the low concentration, strongly unionized industries, somewhat opposite trends are suggested. Once again, hourly earnings followed the all manufacturing trend; labor costs per unit, however, rose by quite a bit more than the average, except in apparel, and the same tendency is evident in the fact that prices in all of these sectors except apparel rose by more than in all manufacturing. Porfit margins, however, tended to decline.

Finally, those industries characterized both by a considerable amount of competition in the product market and by weak union organization all showed fairly similar characterstics. In general, hourly earnings and labor costs per unit rose by somewhat less than in all manufacturing; profit margins, on the other hand, fell quite substantially behind in most instances. In addition, output in these industries increased by considerably less than in manufacturing, although it will be recalled that no significant correlation was found between output, prices, and wages on the basis of year to year changes, or changes during major subperiods.

IV. Summary

The primary purpose of the preceding discussion has been to present a body of data and to describe the statistical procedures utilized in analyzing that data as part of an evaluation of the forces underlying the postwar inflation in the United States. Among the most important of the findings of this statistical analysis are the following:

1. No important relationship was found between percent changes in straight time earnings and either percent changes in output, percent changes in production worker employment, or percent changes in output per production worker man-hour. On the other hand, the data indicated a strong interrelationship, particularly after 1951, between percent changes in straight time hourly earnings, profit levels (measures as a rate of return on stockholders' equity), and 1954 concentration ratios. These general relationships were supported by both simple and multipe cross-section and time series analyses. They were also given support by an analysis of wage "patterns" during the postwar period.

2. Based on the most recent available estimates of union strength, there was no generally applicable relationship between union strength and wage increases in various industries. While these estimates are considerably outdated, it is probable that union strength has not changed greatly in most industries over the past decade.

3. One of the factors underlying the upward movement of hourly earnings during the 1956–58 period was the long-term contracts originating in the automobile and steel settlements of 1955 and 1956, which provided for automatic annual productivity increases and cost-

of-living adjustments through 1957, 1958, and 1959. These contracts established a pattern for several other major industries in the economy.

4. No important relationships were found between percent changes in price and percent changes in output, particularly up to 1954; even after 1954, the only statistically significant relationship appeared in the 1954–55 upswing. In addition, price changes were unrelated to percent changes in productivity per production worker man-hour.

5. Changes in price were most clearly related to profit levels throughout most of the postwar period. A strong relationship to changes in gross hourly earnings also developed after 1951. No consistently strong relationship was found between price changes and concentration ratios.

In closing, it should again be noted that important limitations exist with regard to the nature, scope, and comparability of the data. Nevertheless, it is hoped that the preceding discussion will provide a more complete analysis of the data than has been previously available.

APPENDIXES

Appendix A

Sources of Basic Data

The data underlying the analysis of the movement of manufacturing wages and prices from 1947 to 1958 are presented in tables A–1 to A–21, for each two-digit standard industrial classification. The sources and methodology used in obtaining the data are the following:

I. WHOLESALE PRICE INDEXES

For all two-digit classifications except printing and publishing, transportation equipment, and instruments, wholesale price indexes were computed by recombining the appropriate wholesale price index groups and subgroups, weighted by their relative importance in 1954. In some cases, these special indexes were computed by the Bureau of Labor Statistics for the use of the author; in others, indexes were computed by the author based upon information provided by the Bureau of Labor Statistics regarding the appropriate subgroups to be included. Most of the indexes are not completely comprehensive, in that they do not include all the wholesale price index subgroups which properly should be included; in addition, in order to minimize computations, some small subgroups were sometimes included which should properly have been excluded. The final indexes, however, comprise at least 80 percent of the total weights of items which would be represented by as accurate an index as could be constructed from current items included in the wholesale price index. The composition of each two-digit standard industrial classifications group is as follows:

SIC group	*WPI groups*		*Relative importance in WPI, December 1957 (based on 1954 weights)*
20. Food			12.73
	02	Processed foods	
Source: Wholesale Price Index.			
21. Tobacco			.97
	14–1	Cigarettes	
	14–2	Cigars	
	14–3	Other tobacco products	
Source: Computed by author.			
22. Textile mill products			3.18
	03–1	Cotton	
	03–2	Wool	
	03–3	Manmade fiber textile products	
	03–4	Silk	
	Less: 03–31	Filament yarns and fibers	
Source: Computed by BLS for author.			
23. Apparel and other finished textile products			3.22
	03–51	Womens', misses', and juniors'	
	03–52	Mens' and boys'	
	03–54	Infants' and children's	
	03–55	Underwear and nightwear	
Source: Computed by author.			

SIC group	*WPI groups*	*Relative importance in WPI, December 1967 (based on 1954 weights)*
24. Lumber and wood products		2.97
	08 Lumber and wood products	
Source: Wholesale Price Index.		
25. Furniture and fixtures		1.30
	12-1 Household furniture	
	12-2 Commercial furniture	
Source: Computed by author.		
26. Paper and allied products		5.17
	09 Pulp, paper, and allied products	
Source: Wholesale Price Index.		
27. Printing and publishing		Not available
28. Chemicals and allied products		5.83
	06 Chemicals and allied products	
Source: Wholesale Price Index.		
29. Petroleum refining and related products		4.24
	05-5 Refined petroleum products	
Less:	05-56 Crude petroleum	
	05-57 Natural gas	
Source: Special published BLS Index.		
30. Rubber and related products		1.35
	07 Rubber and rubber products	
Less:	07-11 Natural rubber	
	07-12 Synthetic rubber	
Source: Computed by BLS for author.		
31. Leather and leather products		1.27
	04 Hides, skins, leather, and leather products	
Less:	04-1 Hides and skins	
Source: Computed by BLS for author.		
32. Stone, clay, and glass products		2.15
	11-48 Abrasives	
	12-61 Dinnerware	
	12-62 Glassware	
	12-63 Glass containers	
	13-1 Flat glass	
	13-22 Cement	
	13-31 Building block	
	13-32 Concrete pipe	
	13-4 Structural clay products	
	13-5 Gypsum	
Source: Computed by author.		
33. Primary metals		7.13
	10-13 Semifinished steel products	
	10-14 Finished steel products	
	10-15 Foundry and forge shop products	
	10-16 Pig iron and ferroalloys	
	10-22 Nonferrous refinery shapes	
	10-24 Nonferrous secondary shapes	
	10-25 Nonferrous mill shapes	
	10-26-01 Bare copper wire	
Source: Computed by BLS for author.		

SIC group	*WPI groups*	*Relative importance in WPI, December 1957 (based on 1954 weights)*
34. Fabricated metal products		5.28
	10–3 Metal containers	
	10–4 Hardware	
	10–5 Plumbing equipment	
	10–6 Heating equipment	
	10–7 Fabricated structural products	
	10–8 Fabricated nonstructural products	
Source: Computed by BLS for author.		
35. Machinery, except electrical		7.81
	11–1 Agricultural machinery	
	11–2 Construction machinery	
	11–3 Metalworking machinery	
	11–4 General purpose machinery	
	11–5 Miscellaneous machinery	
Source: Computed by BLS for author.		
36. Electrical machinery		7.11
	11–7 Electrical machinery	
	12–5 TV, radio, and phonographs	
	10–26 Wire and cable	
Source: Computed by BLS for author.		
37. Transportation equipment		Not available
371. Motor vehicles		5.55
	11–8 Motor vehicles	
Source: Wholesale Price Index.		
38. Instruments		Not available
Total weights included in indexes above		77.26
Total weight in WPI represented by "all manufactures" index		82.95

II. GROSS AND STRAIGHT TIME HOURLY EARNINGS

Data on gross hourly earnings were obtained directly from published data of the Bureau of Labor Statistics. The figures are based upon reports from cooperating establishments, and pertain only to production and related workers.

Straight time earnings were derived from the gross figures by applying adjustment factors contained in the May 1950 Monthly Labor Review. The adjustment factor is designed to exclude only the premium pay for overtime at the rate of time and a half for work in excess of 40 hours per week.

III. PRODUCTION AND NONPRODUCTION WORKER EMPLOYMENT

Both series were derived directly from data published by the Bureau of Labor Statistics. The number of production workers is published directly on the basis of reports from cooperating establishments. The number of nonproduction workers was obtained by subtracting production workers from the number of total employees in each 2-digit industry.

IV. OUTPUT

These indexes are based on the 1947 Standard Industrial Classification. All but the index for motor vehicles were provided by the Federal Reserve Board at the request of the Joint Economic Committee. They differ from the regularly published indexes of industrial production of the Reserve Board in that the latter were based on 1947 value added weights, whereas the indexes used here are based on 1954 value added weights. The 1954 weighted indexes were developed as part of the Reserve Board's testing procedures; they do not constitute official Federal Reserve Board indexes, nor does the Board necessarily endorse the use of 1954 weights.

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It may also be noted that the Board has recently published revised indexes, using 1957 weights for the period beginning with January 1953, and based upon the new 1957 Standard Industrial Classifications.

The index for motor vehicles is based upon the published Federal Reserve Board index, with 1947 weights.

V. PRODUCTIVITY

A. *Output per production worker man-hour.*—This series was computed by dividing the Federal Reserve Board output index (1954 weights) by an index of production worker man-hours. Production worker man-hours was computed by multiplying production worker employment by average weekly hours, as published by the BLS.

B. *Output per total worker man-hour.*—This series was computed by dividing the Federal Reserve Board output index (1954 weights) by an index of total worker man-hours. Total worker man-hours represents the sum of production worker man-hours (see A, above) plus the product of nonproduction worker employment times 40 hours per week.

VI. PROFITS: RATES OF RETURN AND MARGINS

A. *Rate of return on stockholders' equity.*—The basic data on profits before and after taxes, and on stockholders' equity were obtained from the Quarterly Financial Report for Manufacturing Corporations, published by the Federal Trade Commission and Securities Exchange Commission. The entire profits and other data for each corporation are included within any given SIC group on the basis of the corporation's major source of gross sales receipts.

The series is based as nearly as possible on the sample used by the FTC–SEC during the period 1956–57. Three breaks in the sample coverage occurred in the first quarter of 1951, the first quarter of 1956, and the first quarter of 1958. In each case, the data were revised to the 1956–57 sample by linking the series on the basis of as many overlap quarters as were available. Annual profits are the sum of the four quarter figures; stockholders' equity is as of the end of the fourth quarter.

B. *Profit margins, and depreciation and depletion charges per dollar of sales.*—Basic data on sales, and depreciation and depletion charges were obtained from FTC–SEC Quarterly Financial Reports, utilizing the same techniques described in A, above.

VII. DIRECT LABOR COSTS PER UNIT OF OUTPUT

The indexes of direct labor costs per unit of output per production worker man-hour, and of direct labor costs per unit of output per total worker man-hour were derived by dividing the index of gross average hourly earnings by the index of productivity per production worker man-hour and per total worker man-hour, respectively.

VIII. CONCENTRATION RATIOS

These ratios have been computed on the basis of data contained in the report on "Concentration in American Industry," prepared for the Subcommittee on Antitrust and Monopoly of the Senate Committee on the Judiciary, 85th Congress, 1st session. The figures used were taken from table 37, "Share of product shipments accounted for by largest companies, 1954."

In arriving at the ratios used, the total values of product shipments in each 4-digit industry (within the given 2-digit classification) showing a 50 percent or more concentration ratio for the eight largest companies constituted the numerator. The denominator represented the total value of product shipments for the entire 2-digit industry. The resulting concentration ratios, therefore, reflect the proportion of the total value of product shipments in each 2-digit group represented by "concentrated" 4-digit industries (those in which the eight largest firms accounted for 50 percent or more of the total value of product shipments in 1954) in that group. The concentration ratios for 1954 were:

20	Food and kindred	22.4
21	Tobacco	100.0
22	Textile mill	11.9
23	Apparel	5.7
24	Lumber	1.5
25	Furniture and fixtures	7.3
26	Paper	5.0
27	Printing and publishing	2.3
28	Chemicals	59.4
29	Petroleum refining	99.1
30	Rubber	51.2
31	Leather	2.3
32	Stone, clay, glass	57.9
33	Primary metals	81.1
34	Fabricated metals	19.3
35	Machinery, nonelectrical	31.1
36	Electrical machinery	72.0
37	Transportation equipment	83.2
371	Motor vehicles	96.3
38	Instruments	69.9

Tables A–1 to A–21 are presented below.

TABLE A–1.—*Basic data: All manufacturing*

[All indexes 1947–49=100]

	Wholesale price index	Index of hourly earnings		Index of employment		Indexes of productivity		Rates of return on stockholders equity		Indexes of direct labor costs		Index of profits plus depreciation plus depletion per dollar of sales	Index of output
		Gross	Straight time	Production workers	Nonproduction workers	Per production worker man-hour	Per total worker man-hour	Before taxes	After taxes	Per unit of output per total worker man-hour	Per unit of output per production worker man-hour		
								Percent	*Percent*				
1947	95.9	93.1	92.7	103.4	97.4	96.0	96.7	24.6	14.9	96.3	97.0	102.3	100
1948	103.8	101.6	101.4	102.8	101.8	100.0	100.0	24.6	15.1	101.6	101.6	105.0	103
1949	100.3	105.4	105.8	93.8	100.8	105.0	103.7	18.3	11.3	101.6	100.4	92.7	97
1950	104.1	110.2	109.5	99.6	103.5	111.0	110.4	26.9	14.7	99.8	99.3	119.0	112
1951	115.5	119.6	118.5	106.4	115.2	111.0	109.5	27.8	12.0	109.2	107.7	114.6	120
1952	112.9	125.6	124.6	106.3	124.6	115.0	112.5	22.2	10.4	111.6	109.2	99.7	125
1953	112.8	133.1	132.4	111.8	133.0	119.0	116.1	22.7	10.6	114.6	111.8	100.6	136
1954	113.7	136.2	136.3	101.8	133.0	125.0	119.0	18.5	9.9	114.5	109.0	98.0	127
1955	115.0	141.4	140.9	105.6	136.8	132.0	126.1	23.6	12.5	112.1	107.1	112.8	142
1956	119.5	148.9	147.9	106.7	144.8	136.0	128.6	22.1	12.0	115.8	109.5	109.3	147
1957	123.2	155.7	155.6	104.4	151.2	141.0	131.1	19.5	10.7	118.8	110.4	102.3	147
1958	124.5	160.2	161.0	94.2	148.8	147.0	133.1	15.1	8.4	120.4	109.0	92.7	136

TABLE A–2.—*Basic data: Food and kindred products*

[All indexes 1947–49=100]

	Wholesale price index	Index of hourly earnings		Index of employment		Index of productivity		Rates of return on stockholders equity		Indexes of direct labor costs		Index of profits plus depreciation plus depletion per dollar of sales	Index of output
		Gross	Straight time	Production workers	Nonproduction workers	Per production worker man-hour	Per total worker man-hour	Before taxes	After taxes	Per unit of output per total worker man-hour	Per unit of output per production worker man-hour		
								Percent	*Percent*				
1947	98.2	93.2	92.6	102.1	95.8	97.1	98.8	28.6	16.1	94.3	96.0	112.3	101
1948	106.1	101.1	101.2	100.3	101.2	99.1	98.8	20.2	12.9	102.3	102.0	93.8	99
1949	95.7	105.7	106.2	97.6	102.9	104.1	102.5	18.7	10.7	103.1	101.5	93.8	100
1950	99.8	110.6	111.2	96.6	108.4	108.5	105.3	21.0	11.1	105.0	101.9	103.1	103
1951	111.4	119.0	119.4	96.8	114.6	109.4	104.9	17.8	8.0	113.4	108.8	84.6	105
1952	108.8	126.5	127.3	96.1	117.2	114.2	108.5	17.4	7.8	116.6	110.8	86.2	108
1953	104.6	134.0	135.1	96.0	120.3	116.4	109.6	17.8	8.1	122.3	115.1	90.8	109
1954	105.3	139.0	140.5	93.1	122.8	122.8	113.9	16.8	8.1	122.0	113.2	89.2	111
1955	101.7	145.7	147.3	92.7	131.1	128.3	116.8	18.1	8.8	124.7	113.6	95.4	116
1956	101.7	152.3	153.4	93.3	126.8	132.6	121.9	18.9	9.3	124.9	114.9	100.0	120
1957	105.6	160.7	162.1	90.0	126.6	139.0	126.1	17.2	8.5	127.4	115.6	92.3	120
1958	110.9	167.3	169.1	87.5	125.8	144.8	130.7	17.4	8.7	128.0	115.5	92.3	122

TABLE A-3.—*Basic data: Tobacco manufactures*

[All indexes 1947-49=100]

	Wholesale price index	Index of hourly earnings		Index of employment		Indexes of productivity		Rates of return on stockholders equity		Indexes of direct labor costs		Index of profits plus depreciation plus depletion per dollar of sales	Index of output
		Gross	Straight time	Production workers	Nonproduction workers	Per production worker man-hour	Per total worker man-hour	Before taxes	After taxes	Per unit of output per total worker man-hour	Per unit of output per production worker man-hour		
								Percent	*Percent*				
1947	95.6	94.9	94.6	104.1	104.3	92.5	92.6	15.9	9.7	102.5	102.6	87.1	98
1948	99.6	100.2	100.0	100.3	104.3	100.2	100.0	21.3	13.2	100.2	100.0	107.1	101
1949	104.9	104.8	105.4	95.6	91.3	108.3	108.4	19.3	12.0	96.7	96.8	105.8	101
1950	107.0	112.9	112.9	89.0	117.4	115.0	112.5	20.8	11.3	100.4	98.2	115.8	102
1951	110.4	119.2	119.3	90.3	113.5	118.7	116.7	21.2	9.3	102.1	100.4	113.3	108
1952	111.3	123.4	123.6	91.5	116.1	121.8	119.6	19.3	8.1	103.2	101.3	102.1	112
1953	119.1	130.8	131.2	90.0	109.6	122.3	120.4	22.4	9.1	108.6	107.0	117.0	110
1954	120.7	137.1	137.6	89.6	112.2	118.8	116.6	20.9	9.9	117.6	115.4	118.3	105
1955	120.8	140.3	139.8	88.8	109.6	119.8	118.1	23.6	11.1	118.8	117.1	134.4	108
1956	121.0	157.9	152.7	84.7	112.2	128.7	126.1	24.1	11.5	120.5	118.0	136.9	111
1957	126.4	160.3	161.3	79.9	126.5	142.5	137.1	25.6	12.3	116.9	112.5	141.9	115
1958	131.0	168.8	168.8	75.7	121.3	158.6	152.5	27.4	13.1	110.7	106.4	148.1	123

TABLE A–4.—*Basic data: Textile mill products*

[All indexes 1947–49=100]

	Wholesale price index	Index of hourly earnings		Index of employment		Index of productivity		Rates of return on stockholders equity		Indexes of direct labor costs		Index of profits plus depreciation plus depletion per dollar of sales	Index of output
		Gross	Straight time	Production workers	Nonproduction workers	Per production worker man-hour	Per total worker man-hour	Before taxes	After taxes	Per unit of output per total worker man-hour	Per unit of output per production worker man-hour		
								Percent	*Percent*				
1947	99.2	92.1	91.9	102.5	95.8	94.9	95.4	33.2	15.9	96.5	97.0	115.8	99
1948	105.9	102.8	102.7	104.7	101.5	99.4	99.7	32.6	15.9	103.1	103.4	115.8	105
1949	94.9	105.1	105.4	92.8	102.7	106.7	105.7	13.9	6.5	98.4	98.5	68.5	98
1950	101.2	109.3	109.0	98.2	106.1	109.0	108.5	24.0	10.6	100.7	100.3	94.6	109
1951	115.9	117.6	117.1	96.1	111.7	110.5	109.2	18.9	6.9	107.7	106.4	77.4	106
1952	98.9	120.2	119.8	90.1	109.7	115.9	114.3	9.6	3.6	105.2	103.7	48.1	105
1953	95.4	121.1	120.7	89.2	110.3	119.2	117.4	10.0	4.0	103.2	101.6	53.3	107
1954	91.8	120.2	120.7	79.9	108.1	127.1	123.9	5.3	1.6	97.0	94.6	39.1	100
1955	92.2	122.9	121.6	80.5	107.6	132.5	129.9	11.0	5.0	94.6	92.8	56.3	110
1956	91.7	128.2	126.1	79.0	105.8	137.9	135.0	11.6	5.7	95.0	93.0	60.3	111
1957	91.5	132.6	131.5	74.7	106.0	141.8	137.9	9.1	4.2	96.2	93.5	52.0	106
1958	88.0	133.5	132.4	69.6	104.6	149.0	144.0	7.9	3.7	92.7	89.6	50.5	103

TABLE A–5.—*Basic data: Apparel and other finished textile products*

[All indexes 1947–49=100]

	Wholesale price index	Index of hourly earnings		Index of employment		Indexes of productivity		Rates of return on stockholders equity		Indexes of direct labor costs		Index of profits plus depreciation plus depletion per dollar of sales	Index of output
		Gross	Straight time	Production workers	Nonproduction workers	Per production worker man-hour	Per total worker man-hour	Before taxes	After taxes	Per unit of output per total worker man-hour	Per unit of output per production worker man-hour		
								Percent	*Percent*				
1947	100.7	97.1	96.5	98.9	92.4	97.5	98.3	23.9	9.5	98.8	99.6	137.1	97
1948	103.2	102.0	101.7	101.4	102.4	100.3	100.2	15.6	6.2	101.8	101.7	93.1	102
1949	96.1	100.9	101.7	99.7	105.1	102.2	101.5	9.9	3.8	99.4	98.7	69.8	101
1950	96.7	103.5	103.5	102.3	107.9	106.2	105.5	13.4	5.0	98.1	97.5	93.1	108
1951	104.4	111.3	112.2	102.6	110.2	103.9	103.1	9.2	2.7	108.0	107.1	67.2	106
1952	101.2	112.2	111.3	103.2	113.4	106.1	105.2	11.6	4.6	106.7	105.7	77.6	111
1953	100.6	114.8	113.9	105.9	116.7	105.8	104.8	11.8	5.1	109.5	108.5	82.8	113
1954	100.1	116.5	117.4	100.3	114.2	104.4	103.3	10.3	4.4	112.8	111.6	77.6	109
1955	100.3	116.5	115.7	103.4	117.1	114.4	113.0	13.0	6.0	103.1	101.8	90.5	120
1956	101.7	125.1	124.3	103.2	119.1	116.0	114.3	16.7	8.2	109.4	107.8	103.4	121
1957	101.8	128.6	127.8	102.2	121.5	116.7	114.4	13.1	6.2	112.4	110.2	85.3	119
1958	101.6	130.3	129.6	98.6	117.2	121.0	118.3	11.7	5.0	110.1	107.7	75.0	117

TABLE A–6.—*Basic data: Lumber and wood products*

[All indexes 1947–49=100]

	Wholesale price index	Index of hourly earnings		Index of employment		Index of productivity		Rates of return on stockholders equity		Indexes of direct labor costs		Index of profits plus depreciation plus depletion per dollar of sales	Index of output
		Gross	Straight time	Production workers	Nonproduction workers	Per production worker man-hour	Per total worker man-hour	Before taxes	After taxes	Per unit of output per total worker man-hour	Per unit of output per production worker man-hour		
								Percent	*Percent*				
1947	93.7	93.3	93.2	105.8	101.1	94.4	94.7	36.7	21.9	98.5	98.8	119.3	101
1948	107.2	101.9	101.7	102.3	99.4	102.2	102.4	30.8	18.5	99.5	99.7	105.5	105
1949	99.2	104.9	105.1	91.9	99.4	103.0	102.3	15.1	9.1	102.5	101.8	75.2	93
1950	113.9	111.0	111.1	100.7	102.8	112.1	111.9	29.9	16.7	99.2	99.0	109.9	112
1951	123.9	121.0	121.4	104.2	115.9	108.9	106.7	26.5	13.2	113.4	111.1	100.5	112
1952	120.3	127.6	127.4	97.4	115.4	113.3	111.7	17.3	9.5	114.2	112.6	75.9	110
1953	120.2	133.3	134.2	94.6	115.4	122.4	120.3	14.8	8.1	110.8	108.9	70.8	114
1954	118.0	134.2	135.0	86.3	111.5	131.0	128.0	13.1	7.1	104.8	102.4	71.6	111
1955	123.6	138.3	138.5	92.0	111.7	134.7	132.6	21.8	12.3	104.3	102.7	96.1	123
1956	125.4	144.9	144.4	90.3	114.2	135.1	132.2	15.5	9.0	109.6	107.3	74.5	119
1957	119.0	149.0	149.6	79.7	109.9	142.0	137.6	8.6	4.6	108.3	104.9	59.3	109
1958	117.7	155.6	155.6	75.4	107.6	151.0	145.9	10.3	5.6	106.6	103.0	67.2	110

TABLE A–7.—*Basic data: Furniture and fixtures*

[All indexes 1947–49=100]

	Wholesale price index	Index of hourly earnings		Index of employment		Index of productivity		Rates of return on stockholders equity		Indexes of direct labor costs		Index of profits plus depreciation plus depletion per dollar of sales	Index of output
		Gross	Straight time	Production workers	Nonproduction workers	Per production worker man-hour	Per total worker man-hour	Before taxes	After taxes	Per unit of output per total worker man-hour	Per unit of output per production worker man-hour		
								Percent	*Percent*				
1947	95.3	93.4	92.6	101.6	96.0	96.9	97.7	32.5	20.8	95.6	96.4	116.3	100
1948	102.3	101.5	101.5	104.3	100.8	99.4	99.8	30.8	19.8	101.7	102.1	108.4	104
1949	102.3	105.1	105.9	94.1	103.2	104.2	102.7	16.5	9.8	102.3	100.9	75.3	96
1950	106.5	109.1	108.5	108.7	115.2	105.2	104.8	29.9	18.1	104.1	103.7	106.1	117
1951	118.7	118.4	118.2	105.2	121.4	104.8	103.0	28.3	12.7	115.0	113.0	102.7	111
1952	115.9	125.2	124.4	104.7	125.0	107.4	105.2	22.3	9.8	119.0	116.6	84.4	114
1953	117.1	131.1	131.5	108.3	131.3	109.7	107.0	21.6	9.5	122.5	119.5	82.1	119
1954	117.2	133.7	135.0	98.6	131.5	128.5	123.1	15.1	6.7	108.6	104.0	71.9	124
1955	119.2	137.9	137.6	105.2	137.8	132.5	128.0	21.0	10.2	107.7	104.1	83.4	141
1956	125.6	143.9	144.7	108.1	146.2	134.7	129.1	23.1	11.4	111.5	106.8	92.4	145
1957	130.6	149.0	150.0	106.4	147.4	133.8	127.3	17.9	8.5	117.0	111.4	78.7	139
1958	132.1	151.6	152.6	100.7	145.4	136.0	128.2	13.6	6.2	118.3	111.5	68.4	132

TABLE A–8.—*Basic data: Paper and allied products*

[All indexes 1947–49=100]

	Wholesale price index	Index of hourly earnings		Index of employment		Index of productivity		Rates of return on stockholders equity		Indexes of direct labor costs		Index of profits plus depreciation plus depletion per dollar of sales	Index of output
		Gross	Straight time	Production workers	Nonproduction workers	Per production worker man-hour	Per total worker man-hour	Before taxes	After taxes	Per unit of output per total worker man-hour	Per unit of output per production worker		
								Percent	*Percent*				
1947	98.6	92.0	91.2	101.3	92.7	97.4	98.7	33.1	20.5	93.2	94.5	119.1	100
1948	102.9	102.0	101.9	101.6	103.7	99.8	99.6	25.9	16.0	102.4	102.2	98.1	102
1949	98.5	106.0	106.9	97.1	103.7	103.0	101.8	16.6	10.3	104.1	102.9	82.8	98
1950	100.9	111.5	110.2	103.6	109.9	111.9	111.3	26.8	15.3	100.2	99.6	110.2	118
1951	119.6	120.1	119.3	108.3	121.1	113.9	112.4	35.0	13.9	106.9	105.4	122.3	125
1952	116.5	127.2	126.8	105.0	130.0	112.6	109.3	23.6	10.4	116.4	113.0	102.5	119
1953	116.1	133.5	132.6	110.3	139.2	116.6	113.0	22.3	10.1	118.1	114.5	96.2	130
1954	116.3	138.2	138.4	109.8	143.7	120.9	116.2	19.8	9.9	118.9	114.3	94.3	132
1955	119.3	144.5	143.4	112.9	153.1	130.5	125.0	22.6	11.5	115.6	110.7	99.4	149
1956	127.2	153.2	152.5	115.7	163.8	134.1	127.3	22.2	11.4	120.3	114.2	98.1	156
1957	129.6	161.1	160.8	114.5	168.9	136.1	128.1	17.6	9.0	125.8	118.4	85.3	155
1958	131.0	167.5	167.4	109.6	169.3	145.4	135.4	14.8	7.6	123.7	115.2	80.9	157

TABLE A–9.—*Basic data: Printing and publishing*

[All indexes 1947–49=100]

	Wholesale price index	Index of hourly earnings		Index of employment		Index of productivity		Rates of return on stockholders equity		Indexes of direct labor costs		Index of profits plus depreciation plus depletion per dollar of sales	Index of output
		Gross	Straight time	Production workers	Nonproduction workers	Per production worker man-hour	Per total worker man-hour	Before taxes	After taxes	Per unit of output per total worker man-hour	Per unit of output per production worker man-hour		
								Percent	*Percent*				
1947	(1)	90.4	89.8	99.4	96.0	94.8	96.5	28.9	20.6	93.7	95.4	110.6	96
1948	(1)	101.3	101.2	100.9	100.5	100.3	100.3	24.6	17.1	101.0	101.0	98.9	101
1949	(1)	108.4	109.0	99.7	103.4	105.1	103.2	20.2	13.9	105.0	103.1	90.4	103
1950	(1)	112.2	112.6	100.9	108.4	108.6	105.4	21.5	14.0	106.5	103.3	96.8	108
1951	(1)	117.1	117.5	103.1	107.9	108.3	106.1	24.0	12.5	110.4	108.1	108.5	110
1952	(1)	123.6	124.1	104.8	110.8	107.2	104.4	21.6	11.4	118.4	115.3	97.9	110
1953	(1)	129.4	130.1	106.6	115.1	109.1	105.8	22.1	11.9	122.3	118.6	98.9	115
1954	(1)	133.6	134.3	107.2	118.4	114.7	109.8	20.2	11.5	121.7	116.5	94.7	120
1955	(1)	138.3	138.6	110.1	121.4	116.8	112.3	22.8	12.7	123.2	118.4	101.1	127
1956	(1)	142.4	142.8	114.3	124.0	118.9	115.0	24.5	13.0	123.8	119.8	103.2	134
1957	(1)	147.1	148.2	115.1	125.6	119.0	114.6	22.2	11.4	128.4	123.6	96.8	134
1958	(1)	152.4	153.6	113.4	126.4	120.2	114.0	18.0	8.9	133.7	126.8	88.3	131

[1] Not available.

TABLE A–10.—*Basic data: Chemicals and allied products*

[All indexes 1947–49=100]

	Wholesale price index	Index of hourly earnings		Index of employment		Index of productivity		Rates of return on stockholders equity		Indexes of direct labor costs		Index of profits plus depreciation plus depletion per dollar of sales	Index of output
		Gross	Straight time	Production workers	Nonproduction workers	Per production worker man-hour	Per total worker man-hour	Before taxes	After taxes	Per unit of output per total worker man-hour	Per unit of output per production worker man-hour		
								Percent	*Percent*				
1947	101.4	92.0	91.7	102.9	96.4	93.0	93.6	24.4	14.8	98.3	98.9	100.2	96
1948	103.8	101.2	101.0	102.3	101.5	100.3	99.6	25.6	15.2	101.6	100.9	100.2	103
1949	94.8	106.8	107.3	94.8	102.1	107.4	107.3	20.1	12.3	99.5	99.4	99.6	101
1950	96.3	112.8	112.7	96.8	107.2	127.6	123.2	30.6	16.4	91.6	88.4	133.6	124
1951	110.0	121.7	121.2	105.0	121.8	131.6	125.5	31.3	12.3	97.0	92.5	129.0	139
1952	104.5	127.7	128.2	105.2	132.9	137.4	127.5	25.2	11.0	100.2	92.9	115.6	144
1953	103.6	136.7	136.8	108.3	145.2	142.4	129.9	25.1	11.0	105.2	96.0	117.6	154
1954	107.0	142.6	143.0	104.2	147.8	147.7	132.2	22.4	11.7	107.9	96.5	115.6	153
1955	106.6	148.6	148.4	107.0	150.9	166.1	149.4	27.9	14.7	99.5	89.5	134.3	178
1956	107.2	157.6	157.8	108.4	159.6	176.3	156.2	25.8	13.7	100.9	89.4	127.6	191
1957	109.5	165.8	166.3	106.8	170.9	186.9	160.9	24.5	13.0	103.0	88.7	123.6	199
1958	110.4	172.5	173.3	100.4	176.1	200.4	166.4	20.1	11.0	103.7	86.1	113.6	199

TABLE A–11.—*Basic data: Petroleum and related products*

[All indexes 1947–49=100]

	Wholesale price index	Index of hourly earnings		Index of employment		Index of productivity		Rates of return on stockholders equity		Indexes of direct labor costs		Index of profits plus depreciation plus depletion per dollar of sales	Index of output
		Gross	Straight time	Production workers	Nonproduction workers	Per production worker man-hour	Per total worker man-hour	Before taxes	After taxes	Per unit of output per total worker man-hour	Per unit of output per production worker man-hour		
								Percent	*Percent*				
1947	89.6	90.0	89.9	98.9	97.6	97.8	98.2	18.8	14.2	91.6	92.0	100.5	97
1948	112.1	102.5	102.3	102.1	103.0	101.6	101.4	24.9	18.6	100.9	100.7	110.6	104
1949	98.3	107.7	107.9	98.9	99.4	99.6	99.3	14.8	11.8	108.5	108.1	88.9	98
1950	111.0	110.3	109.7	96.8	103.0	112.8	111.4	18.7	13.6	99.0	97.8	101.4	110
1951	109.4	119.1	118.4	101.2	114.5	119.7	116.4	22.3	14.8	102.3	99.5	107.2	122
1952	111.2	125.7	125.2	98.2	126.6	123.3	115.6	17.2	12.9	108.7	101.9	94.2	121
1953	111.9	132.9	132.6	100.3	131.2	128.0	119.7	17.3	13.1	111.0	103.8	97.1	129
1954	109.0	136.5	136.4	95.3	135.1	128.4	117.3	15.0	12.2	116.4	106.3	95.2	123
1955	111.2	141.9	141.3	93.4	140.2	142.7	128.5	16.4	13.0	110.4	99.4	101.0	135
1956	117.5	152.8	151.9	92.6	141.8	149.4	133.6	16.6	13.3	114.4	102.3	102.4	140
1957	125.8	159.4	158.7	90.3	144.7	152.8	134.5	13.9	11.9	118.5	104.3	92.8	139
1958	114.8	164.8	164.9	84.4	140.6	154.4	133.8	10.4	9.6	123.2	106.7	85.0	130

TABLE A–12.—*Basic data: Rubber and miscellaneous plastics products*

[All indexes, 1947–49=100]

	Wholesale price index	Index of hourly earnings		Index of employment		Index of productivity		Rates of return on stockholders equity		Indexes of direct labor costs		Index of profits plus depreciation plus depletion per dollar of sales	Index of output
		Gross	Straight time	Production workers	Nonproduction workers	Per production worker man-hour	Per total worker man-hour	Before taxes	After taxes	Per unit of output per total worker man-hour	Per unit of output per production worker man-hour		
								Percent	*Percent*				
1947	98.0	95.8	95.6	108.0	102.7	96.4	97.6	24.2	12.2	98.2	99.4	109.2	106
1948	101.8	100.3	100.5	102.1	100.7	100.1	100.3	21.0	12.0	100.0	100.2	105.1	102
1949	100.2	103.9	104.0	89.9	96.6	105.6	103.6	13.6	8.6	100.3	98.4	85.7	93
1950	112.0	108.5	106.8	97.2	98.6	109.1	109.7	29.6	16.1	98.9	99.5	127.6	111
1951	132.5	116.4	115.2	104.5	106.0	106.9	107.3	36.9	14.4	108.5	108.9	135.7	116
1952	128.4	126.1	124.4	103.9	113.0	108.1	107.1	27.1	10.9	117.7	116.7	113.3	117
1953	125.7	132.9	131.4	108.3	118.2	112.9	111.6	26.0	11.2	119.1	117.7	110.2	126
1954	127.7	135.7	134.9	95.0	113.6	122.3	118.2	20.6	10.5	114.8	111.0	107.1	118
1955	140.2	144.0	140.5	105.4	117.5	122.7	121.6	26.0	12.6	118.4	117.4	116.3	138
1956	145.6	149.5	148.2	103.6	119.4	123.8	120.9	23.6	11.8	123.7	120.8	116.3	132
1957	146.5	155.7	153.9	101.1	121.8	126.0	122.1	21.1	10.9	127.5	123.6	111.2	132
1958	148.2	161.9	161.6	91.4	120.4	133.6	126.0	19.0	9.3	128.5	121.2	109.2	123

TABLE A–13.—*Basic data: Leather and leather products*

[All indexes, 1947–49=100]

	Wholesale price index	Index of hourly earnings		Index of employment		Index of productivity		Rates of return on stockholders equity		Indexes of direct labor costs		Index of profits plus depreciation plus depletion per dollar of sales	Index of output
		Gross	Straight time	Production workers	Nonproduction workers	Per production worker man-hour	Per total worker man-hour	Before taxes	After taxes	Per unit of output per total worker man-hour	Per unit of output per production worker man-hour		
								Percent	*Percent*				
1947	99.5	95.4	95.1	102.9	93.3	99.1	100.4	21.8	7.7	95.0	96.3	127.2	105
1948	102.1	101.5	101.5	101.5	105.9	99.3	98.8	15.9	5.8	102.7	102.2	98.7	100
1949	98.4	103.1	103.4	95.7	100.8	101.7	100.9	9.7	3.4	102.2	101.4	74.0	95
1950	104.9	107.4	108.0	97.6	98.3	106.2	106.2	17.7	6.1	101.1	101.1	113.9	104
1951	120.5	115.1	115.4	93.7	96.3	105.2	108.2	12.6	2.9	106.4	109.4	85.4	97
1952	103.8	119.7	120.0	94.7	97.6	107.2	107.2	15.1	8.2	111.7	111.7	106.3	104
1953	104.3	124.2	124.6	95.9	99.3	107.9	107.5	16.0	8.8	115.5	115.1	110.1	104
1954	101.6	125.1	125.5	91.4	99.3	114.5	113.2	15.4	8.7	110.5	109.3	113.9	103
1955	101.4	127.8	128.3	94.6	103.1	117.2	116.2	20.2	12.1	110.0	109.0	132.9	112
1956	107.4	135.1	135.7	93.7	102.9	121.3	120.1	14.7	7.0	112.5	111.4	102.5	114
1957	108.0	139.6	140.3	91.0	102.6	124.4	122.8	14.7	6.9	113.7	112.2	104.4	113
1958	109.0	142.3	143.1	87.9	99.6	126.4	124.4	12.4	5.5	114.4	112.6	94.9	109

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TABLE A–14.—*Basic data: Stone, clay, and glass products*

[All indexes 1947–49=100]

	Wholesale price index	Index of hourly earnings		Index of employment		Indexes of productivity		Rates of return on stockholders equity		Indexes of direct labor costs		Index of profits plus depreciation plus depletion per dollar of sales	Index of output
		Gross	Straight time	Production workers	Nonproduction workers	Per production worker man-hour	Per total worker man-hour	Before taxes	After taxes	Per unit of output per total worker man-hour	Per unit of output per production worker man-hour		
								Percent	*Percent*				
1947	92.7	92.6	92.2	101.6	95.5	96.3	97.2	23.6	14.3	95.3	96.2	94.6	99
1948	101.1	101.3	101.1	103.2	101.5	100.1	100.4	24.6	15.2	100.9	101.2	101.7	104
1949	105.5	106.1	106.7	95.2	103.0	104.0	102.6	21.6	13.4	103.4	102.0	103.7	97
1950	109.3	111.4	110.7	101.6	107.6	113.5	112.9	33.1	17.9	98.7	98.1	131.7	117
1951	117.3	119.4	118.7	109.0	115.2	115.8	115.3	33.3	13.8	103.6	103.1	127.8	129
1952	118.1	124.8	124.3	102.9	120.9	117.8	115.4	25.0	11.5	108.1	105.9	110.2	123
1953	123.6	133.4	133.2	105.8	125.9	118.3	115.6	25.2	11.5	115.4	112.8	110.9	126
1954	127.4	137.2	137.2	99.2	126.4	123.0	118.8	23.0	12.2	115.5	111.5	111.5	122
1955	131.5	144.2	143.6	105.9	132.6	128.5	124.8	29.0	15.1	115.5	112.2	127.8	139
1956	139.0	152.0	150.8	108.2	140.3	132.4	127.8	27.4	14.3	118.9	114.8	127.8	145
1957	144.7	159.0	158.8	104.8	142.2	136.8	130.1	22.5	12.1	122.2	116.2	120.0	143
1958	149.5	164.4	163.6	96.0	146.5	142.7	133.2	19.0	10.3	123.4	115.2	116.1	135

TABLE A–15.—*Basic data: Primary metal industries*

[All indexes 1947–49=100]

	Wholesale price index	Index of hourly earnings		Index of employment		Indexes of productivity		Rates of return on stockholders equity		Indexes of direct labor costs		Index of profits plus depreciation plus depletion per dollar of sales	Index of output
		Gross	Straight time	Production workers	Nonproduction workers	Per production worker man-hour	Per total worker man-hour	Before taxes	After taxes	Per unit of output per total worker man-hour	Per unit of output per production worker man-hour		
								Percent	*Percent*				
1947	90.4	92.6	92.2	104.3	98.5	97.9	98.7	18.2	11.1	93.8	94.6	97.4	103
1948	102.8	101.5	101.1	105.0	101.7	100.2	100.9	22.7	13.1	100.6	101.3	105.1	107
1949	106.8	105.9	106.6	90.6	99.8	102.3	100.4	16.1	9.6	105.5	103.5	97.4	90
1950	111.7	109.9	108.7	100.6	102.3	109.5	109.7	27.2	14.6	100.2	100.4	128.8	114
1951	123.8	120.7	118.9	110.1	116.2	107.9	108.2	32.3	12.8	111.6	111.9	129.5	125
1952	125.1	126.8	125.7	101.4	122.1	108.0	106.2	18.9	9.5	119.4	117.4	96.8	113
1953	132.3	137.4	136.0	109.9	131.1	114.1	112.4	24.2	10.8	122.2	120.4	113.5	130
1954	136.1	139.4	140.1	95.9	130.8	112.7	108.3	16.5	8.8	128.7	123.7	110.0	106
1955	145.0	149.4	147.6	105.4	134.9	124.5	122.2	26.8	13.9	122.3	120.6	130.9	137
1956	157.8	157.4	156.5	106.6	143.4	122.1	118.6	25.7	13.6	132.7	128.9	126.0	135
1957	163.0	166.8	166.7	105.1	150.5	123.6	117.8	20.0	10.5	141.6	135.0	115.5	130
1958	164.2	176.8	178.4	86.5	146.9	122.0	112.8	12.7	6.7	156.7	144.9	102.3	102

TABLE A–16.—*Basic data: Fabricated metal products*

[All indexes 1947–49=100]

	Wholesale price index	Index of hourly earnings		Index of employment		Indexes of productivity		Rates of return on stockholders equity		Indexes of direct labor costs		Index of profits plus depreciation plus depletion per dollar of sales	Index of output
		Gross	Straight time	Production workers	Nonproduction workers	Per production worker man-hour	Per total worker man-hour	Before taxes	After taxes	Per unit of output per total worker man-hour	Per unit of output per production worker man-hour		
								Percent	*Percent*				
1947	90.8	92.6	92.0	105.5	97.7	95.6	97.1	20.5	18.0	95.4	96.9	109.6	102
1948	102.5	101.4	101.0	103.3	102.1	100.1	100.5	28.3	17.5	100.9	101.3	104.7	104
1949	106.7	106.0	107.0	91.1	100.2	104.0	101.7	18.4	10.8	104.2	101.9	85.7	93
1950	110.4	111.2	110.0	104.0	102.7	106.9	107.7	29.4	16.2	103.2	104.0	113.7	114
1951	121.6	119.8	118.2	112.2	116.7	104.4	104.4	32.6	14.0	114.8	114.8	113.7	121
1952	120.6	126.3	124.9	108.8	122.6	104.4	102.8	22.7	10.6	122.9	121.0	87.4	117
1953	122.4	134.3	132.4	119.4	131.7	107.0	105.9	22.9	10.4	126.8	125.5	81.6	132
1954	124.0	137.9	137.7	108.0	131.3	109.3	105.7	16.4	7.9	130.5	126.2	72.5	119
1955	127.8	143.8	142.1	114.7	135.5	110.0	107.4	21.0	10.4	133.9	130.7	84.1	130
1956	136.0	150.3	149.6	114.3	144.0	111.4	107.3	20.2	10.3	140.1	134.9	79.9	130
1957	141.8	158.3	157.9	114.6	151.1	114.9	109.4	18.2	9.0	144.7	137.8	75.8	133
1958	142.6	164.8	166.3	102.1	147.5	120.5	112.0	14.7	7.1	147.1	136.8	70.1	122

TABLE A–17.—*Basic data: Machinery, except electrical*

[All indexes 1947–49=100]

	Wholesale price index	Index of hourly earnings		Index of employment		Indexes of productivity		Rates of return on stockholders equity		Indexes of direct labor costs		Index of profits plus depreciation plus depletion per dollar of sales	Index of output
		Gross	Straight time	Production workers	Nonproduction workers	Per production worker man-hour	Per total worker man-hour	Before taxes	After taxes	Per unit of output per total worker man-hour	Per unit of output per production worker man-hour		
								Percent	*Percent*				
1947	92.4	93.1	92.9	106.6	99.7	96.1	97.7	26.9	16.1	95.3	96.9	103.2	104
1948	101.1	101.3	100.7	105.5	103.5	99.5	100.1	27.3	16.6	101.2	101.8	102.4	106
1949	106.6	105.5	106.4	88.0	96.9	105.6	102.6	19.8	11.9	102.8	99.9	94.4	90
1950	110.2	110.9	110.0	91.7	97.8	109.5	108.6	26.2	14.4	102.1	101.3	115.1	103
1951	122.5	121.4	118.6	109.8	112.3	107.0	107.9	33.2	13.2	112.5	113.5	119.0	125
1952	123.1	128.3	126.4	112.6	120.9	112.3	111.8	28.6	11.6	114.8	114.2	104.0	133
1953	125.7	135.2	133.6	114.6	127.3	116.9	115.2	24.1	10.0	117.4	115.7	93.7	139
1954	127.8	138.7	139.3	101.3	127.2	118.0	111.7	18.7	8.9	124.2	117.5	89.7	119
1955	133.3	144.2	142.9	103.7	130.1	120.4	114.9	21.7	10.5	125.5	119.8	100.8	128
1956	144.2	152.4	151.4	112.5	142.0	122.9	117.3	25.1	12.4	129.9	124.0	106.3	143
1957	153.5	158.7	159.3	110.4	151.6	121.6	112.7	21.0	10.4	140.8	130.5	98.4	135
1958	157.1	164.2	166.4	91.4	145.3	128.4	112.9	14.7	7.0	145.4	127.9	88.1	114

TABLE A–18.—*Basic data: Electrical machinery*

[All indexes 1947–49=100]

	Wholesale price index	Index of hourly earnings		Index of employment		Indexes of productivity		Rates of return on stockholders equity		Indexes of direct labor costs		Index of profits plus depreciation plus depletion per dollar of sales	Index of output
		Gross	Straight time	Production workers	Nonproduction workers	Per production worker man-hour	Per total worker man-hour	Before taxes	After taxes	Per unit of output per total worker man-hour	Per unit of output per production worker man-hour		
								Percent	*Percent*				
1947	96.3	93.1	92.9	110.2	100.2	92.7	95.0	29.8	17.2	98.0	100.4	101.5	103
1948	101.5	101.5	101.3	102.6	101.1	99.2	99.6	26.2	14.6	101.9	102.3	101.5	102
1949	102.2	105.4	105.8	87.1	98.7	110.4	106.5	21.4	12.5	99.0	95.5	97.0	95
1950	103.7	107.9	106.5	104.6	97.8	107.9	110.4	38.2	18.4	97.7	100.0	138.0	116
1951	116.2	116.3	114.9	120.1	112.2	104.0	106.5	36.6	13.2	109.2	111.8	128.2	129
1952	117.0	122.9	121.7	127.6	126.0	118.6	119.9	33.5	12.8	102.5	103.6	112.2	156
1953	120.4	129.6	128.5	144.5	139.2	118.1	119.7	32.0	12.5	108.3	109.7	103.3	174
1954	120.3	134.0	133.8	123.8	138.9	129.1	125.1	23.6	11.7	107.1	103.8	93.5	159
1955	123.4	138.4	137.5	128.4	142.5	134.7	131.8	23.7	11.6	105.0	102.7	93.5	176
1956	133.2	145.8	145.1	135.9	156.8	140.7	136.2	23.1	11.1	107.0	103.6	87.2	195
1957	139.7	152.4	152.6	133.9	172.7	146.0	136.3	24.7	12.0	111.8	104.4	94.4	196
1958	140.7	158.3	159.4	117.1	174.2	148.3	131.9	20.2	10.0	120.0	106.7	88.1	172

TABLE A–19.—*Basic data: Transportation equipment*

[All indexes 1947–49=100]

	Wholesale price index	Index of hourly earnings		Index of employment		Indexes of productivity		Rates of return on stockholders equity		Indexes of direct labor costs		Index of profits plus depreciation plus depletion per dollar of sales	Index of output
		Gross	Straight time	Production workers	Nonproduction workers	Per production worker man-hour	Per total worker man-hour	Before taxes	After taxes	Per unit of output per total worker man-hour	Per unit of output per production worker man-hour		
								Percent	*Percent*				
1947	(1)	92.7	92.8	102.5	99.1	91.4	92.0	20.5	10.7	100.8	101.4	86.3	94
1948	(1)	101.2	101.3	101.3	102.2	101.1	100.9	27.6	15.8	100.3	100.1	102.2	102
1949	(1)	106.1	105.9	96.2	98.7	107.0	106.5	30.1	17.7	99.6	99.2	111.5	103
1950	(1)	111.2	109.8	101.3	99.6	113.2	114.5	44.0	21.2	97.1	98.2	142.5	120
1951	(1)	118.5	117.0	119.3	126.9	108.3	108.0	35.9	13.3	109.7	109.4	111.5	135
1952	(1)	125.6	122.9	130.5	156.9	109.5	106.8	35.8	13.5	117.6	114.7	104.7	151
1953	(1)	132.6	130.1	150.9	178.9	116.6	113.9	38.0	13.8	116.4	113.7	93.9	185
1954	(1)	136.4	134.6	129.8	177.9	125.2	118.0	30.4	14.6	115.6	108.9	93.9	168
1955	(1)	142.9	139.2	137.7	185.3	130.5	130.2	43.1	20.0	109.8	104.7	124.0	201
1956	(1)	148.0	145.8	132.4	204.9	141.0	129.4	27.8	13.4	114.4	105.0	98.0	195
1957	(1)	154.4	153.6	135.3	215.9	151.9	137.9	28.5	14.1	112.0	101.6	97.2	212
1958	(1)	162.1	161.4	109.9	204.7	161.2	139.5	16.1	8.6	116.2	100.6	76.3	180

[1] Not available.

TABLE A–20.—*Basic data: Motor vehicles and equipment*

[All indexes 1947–49=100]

	Wholesale price index	Index of hourly earnings		Index of employment		Indexes of productivity		Rates of return on stockholders equity		Indexes of direct labor costs		Index of profits plus depreciation plus depletion per dollar of sales	Index of output
		Gross	Straight time	Production workers	Nonproduction workers	Per production worker man-hour	Per total worker man-hour	Before taxes	After taxes	Per unit of output per total worker man-hour	Per unit of output per production worker man-hour		
								Percent	*Percent*				
1947	91.3	92.3	92.1	100.4	98.9	(1)	(1)	27.9	15.6	(1)	(1)	90.7	95
1948	100.8	101.0	101.1	101.3	104.6	(1)	(1)	32.9	18.7	(1)	(1)	99.5	101
1949	107.9	106.7	106.8	98.3	96.5	(1)	(1)	35.8	20.9	(1)	(1)	109.8	104
1950	107.3	111.7	109.4	108.6	96.0	(1)	(1)	51.8	24.6	(1)	(1)	137.1	132
1951	112.9	119.9	119.6	109.5	106.1	(1)	(1)	39.5	14.1	(1)	(1)	107.6	120
1952	119.6	128.0	126.0	99.7	113.2	(1)	(1)	36.8	13.6	(1)	(1)	105.4	102
1953	118.9	134.3	131.8	118.7	125.6	(1)	(1)	37.9	13.6	(1)	(1)	92.9	126
1954	119.3	137.4	135.6	96.6	117.4	(1)	(1)	29.4	13.9	(1)	(1)	95.8	109
1955	122.9	143.7	139.4	115.5	122.2	(1)	(1)	46.1	21.1	(1)	(1)	126.8	153
1956	129.8	147.5	145.8	100.3	125.3	(1)	(1)	27.1	13.0	(1)	(1)	100.2	125
1957	135.4	154.4	152.9	97.5	121.3	(1)	(1)	28.1	14.0	(1)	(1)	102.5	128
1958	139.7	160.0	159.9	74.3	117.0	(1)	(1)	14.4	8.1	(1)	(1)	80.3	99

[1] Not available.

TABLE A–21.—*Basic data: Instruments*

[All indexes 1947–49=100]

	Wholesale price index	Index of hourly earnings		Index of employment		Indexes of productivity		Rates of return on stockholders equity		Indexes of direct labor costs		Index of profits plus depreciation plus depletion per dollar of sales	Index of output
		Gross	Straight time	Production workers	Nonproduction workers	Per production worker man-hour	Per total worker man-hour	Before taxes	After taxes	Per unit of output per total worker man-hour	Per unit of output per production worker man-hour		
								Percent	*Percent*				
1947	(1)	92.7	92.2	106.7	96.7	95.9	98.2	21.5	13.6	94.4	96.7	(1)	103
1948	(1)	101.3	101.6	102.6	101.7	101.2	101.4	21.3	13.4	99.9	100.1	(1)	104
1949	(1)	106.1	106.3	90.7	101.7	103.6	100.5	18.4	11.4	105.6	102.4	(1)	93
1950	(1)	112.1	110.9	94.8	106.7	110.6	108.2	28.5	15.7	103.6	101.4	(1)	108
1951	(1)	123.1	121.1	111.6	125.7	105.6	103.9	29.3	11.7	118.5	116.6	(1)	124
1952	(1)	130.7	128.9	117.3	137.8	120.6	117.2	27.1	10.5	111.5	108.4	(1)	148
1953	(1)	135.2	133.6	125.6	151.8	123.9	119.2	25.8	10.0	113.4	109.1	(1)	161
1954	(1)	139.0	139.1	116.1	158.0	134.5	123.9	23.3	11.0	112.2	103.3	(1)	156
1955	(1)	145.1	144.5	115.4	162.0	142.0	130.4	24.0	11.1	111.3	102.2	(1)	167
1956	(1)	152.7	151.6	118.7	175.5	147.9	133.7	24.9	11.9	114.2	103.2	(1)	179
1957	(1)	160.3	160.2	116.6	186.2	156.7	137.7	23.6	11.7	116.4	102.3	(1)	184
1958	(1)	166.4	166.4	105.8	183.2	164.0	139.7	21.1	10.1	119.1	101.5	(1)	173

[1] Not available.

APPENDIX B

CROSS-SECTION CORRELATION MATRIXES

TABLE B–1.—*Matrixes of simple cross-section correlation coefficients: Wages (N=19)*

Variable	1	2	3	4	5	6	7
	1947–48						
1. Percent change: Straight-time hourly earnings	1.0	0.417	−0.248	0.195	0.012	0.138	0.226
2. Percent change: Production workers employment		1.0	−.357	.609	.121	.150	−.276
3. Percent change: Output per production worker man-hour			1.0	.486	.394	.367	.396
4. Percent change: Output				1.0	.463	.472	.177
5. Average return on equity before taxes					1.0	.873	−.108
6. Average return on equity after taxes						1.0	.071
7. Concentration ratio							1.0
	1948–49						
1. Percent change: Straight-time hourly earnings	1.0	−0.050	0.162	0.024	0.616	0.777	0.336
2. Percent change: Production worker employment		1.0	−.318	.857	−.057	−.002	−.202
3. Percent change: Output per production worker man-hour			1.0	.186	.444	.282	.107
4. Percent change: Output				1.0	.237	.203	−.103
5. Average return on equity before taxes					1.0	.940	.447
6. Average return on equity after taxes						1.0	.527
7. Concentration ratio							1.0
	1949–50						
1. Percent change: Straight-time hourly earnings	1.0	−0.563	0.362	−0.372	−0.087	−0.097	0.033
2. Percent change: Production worker employment		1.0	−.457	.779	.591	.518	−.191
3. Percent change: Output per production worker man-hour			1.0	.142	−.052	.090	.293
4. Percent change: Output				1.0	.654	.653	.085
5. Average return on equity before taxes					1.0	.902	.307
6. Average return on equity after taxes						1.0	.340
7. Concentration ratio							1.0
	1950–51						
1. Percent change: Straight-time hourly earnings	1.0	0.171	−0.247	0.078	0.178	0.127	0.045
2. Percent change: Production worker employment		1.0	−.464	.908	.715	.554	.507
3. Percent change: Output per production worker man-hour			1.0	−.085	−.254	.017	.093
4. Percent change: Output				1.0	.631	.588	.722
5. Average return on equity before taxes					1.0	.869	.361
6. Average return on equity after taxes						1.0	.371
7. Concentration ratio							1.0
	1951–52						
1. Percent change: Straight-time hourly earnings	1.0	0.087	0.118	0.039	0.598	0.707	0.283
2. Percent change: Production worker employment		1.0	.431	.870	.620	.369	.328
3. Percent change: Output per production worker man-hour			1.0	.793	.284	.081	.389
4. Percent change: Output				1.0	.491	.210	.330
5. Average return on equity before taxes					1.0	.821	.458
6. Average return on equity after taxes						1.0	.463
7. Concentration ratio							1.0

TABLE B–1.—*Matrixes of simple cross-section correlation coefficients: Wages (N=19)*—Continued

Variable	1	2	3	4	5	6	7
	1952–53						
1. Percent change: Straight-time hourly earnings	1.0	0.249	0.251	0.332	0.550	0.689	0.423
2. Percent change: Production worker employment		1.0	.082	.897	.782	.582	.370
3. Percent change: Output per production worker man-hour			1.0	.488	.154	.205	.080
4. Percent change: Output				1.0	.724	.603	.360
5. Average return on equity before taxes					1.0	.806	.559
6. Average return on equity after taxes						1.0	.537
7. Concentration ratio							1.0
	1953–54						
1. Percent change: Straight-time hourly earnings	1.0	0.203	−0.279	−0.067	0.628	0.520	0.463
2. Percent change: Production worker employment		1.0	−.310	.705	−.083	.035	−.235
3. Percent change: Output per production worker man-hour			1.0	.416	.111	−.006	−.264
4. Percent change: Output				1.0	−.059	−.020	−.471
5. Average return on equity before taxes					1.0	.907	.553
6. Average return on equity after taxes						1.0	.598
7. Concentration ratio							1.0
	1954–55						
1. Percent change: Straight-time hourly earnings	1.0	0.233	0.102	0.383	0.514	0.600	0.383
2. Percent change: Production worker employment		1.0	−.155	.704	.413	.343	−.142
3. Percent change: Output per production worker man-hour			1.0	.504	.152	.261	.306
4. Percent change: Output				1.0	.500	.494	.199
5. Average return on equity before taxes					1.0	.912	.447
6. Average return on equity after taxes						1.0	.460
7. Concentration ratio							1.0
	1955–56						
1. Percent change: Straight-time hourly earnings	1.0	−0.197	0.354	0.086	0.055	0.146	0.428
2. Percent change: Production worker employment		1.0	−.172	.771	.323	.244	−.141
3. Percent change: Output per production worker man-hour			1.0	.457	.011	.008	.391
4. Percent change: Output				1.0	.259	.232	.182
5. Average return on equity before taxes					1.0	.862	.512
6. Average return on equity after taxes						1.0	.603
7. Concentration ratio							1.0
	1956–57						
1. Percent change: Straight-time hourly earnings	1.0	0.230	0.390	0.372	0.546	0.544	0.607
2. Percent change: Production worker employment		1.0	−.258	.586	.561	.570	.186
3. Percent change: Output per production worker man-hour			1.0	.603	.378	.328	.504
4. Percent change: Output				1.0	.726	.698	.480
5. Average return on equity before taxes					1.0	.906	.612
6. Average return on equity after taxes						1.0	.755
7. Concentration ratio							1.0

TABLE B–1.—*Matrixes of simple cross-section correlation coefficients: Wages (N=19)*—Continued

Variable	1	2	3	4	5	6	7
	1957–58						
1. Percent change: Straight-time hourly earnings	1.0	−0.576	0.049	−0.440	0.392	0.484	0.549
2. Percent change: Production worker employment		1.0	.079	.880	−.009	−.030	−.532
3. Percent change: Output per production worker man-hour			1.0	.527	.462	.359	.121
4. Percent change: Output				1.0	.222	.171	−.349
5. Average return on equity before taxes					1.0	.883	.506
6. Average return on equity after taxes						1.0	.698
7. Concentration ratio							1.0

TABLE B–2.—*Matrixes of simple cross-section correlation coefficients: Wholesale prices (N=16)*

Variable	1	2	3	4	5	6	7	8
	1947–48							
1. Percent change: Gross hourly earnings	1.0	0.423	−0.361	0.188	0.093	0.029	0.107	0.333
2. Percent change: Production worker employment		1.0	−.439	.647	.291	.089	.110	−.161
3. Percent change: Output per production worker man-hour			1.0	.369	.024	.404	.383	.356
4. Percent change: Output				1.0	.375	.438	.458	.206
5. Percent change: Wholesale price index					1.0	.339	.560	.329
6. Average return on equity before taxes						1.0	.888	−.104
7. Average return on equity after taxes							1.0	.139
8. Concentration ratio								1.0
	1948–49							
1. Percent change: Gross hourly earnings	1.0	−0.191	0.152	−0.106	0.214	0.767	0.888	0.595
2. Percent change: Production worker employment		1.0	−.421	.832	−.520	−.333	−.230	−.125
3. Percent change: Output per production worker man-hour			1.0	.133	.328	.534	.295	.172
4. Percent change: Output				1.0	−.416	−.045	−.074	−.037
5. Percent change: Wholesale price index					1.0	.439	.335	.287
6. Average return on equity before taxes						1.0	.927	.466
7. Average return on equity after taxes							1.0	.615
8. Concentration ratio								1.0
	1949–50							
1. Percent change: Gross hourly earnings	1.0	−0.371	0.303	−0.151	−0.055	0.087	0.126	0.033
2. Percent change: Production worker employment		1.0	−.480	.781	−.050	.735	.595	−.246
3. Percent change: Output per production worker man-hour			1.0	.104	.170	−.092	.007	.288
4. Percent change: Output				1.0	.073	.776	.762	−.013
5. Percent change: Wholesale price index					1.0	−.041	.113	−.019
6. Average return on equity before taxes						1.0	.907	.138
7. Average return on equity after taxes							1.0	.256
8. Concentration ratio								1.0

TABLE B–2.—*Matrixes of simple cross-section correlation coefficients: Wholesale prices (N=16)*—Continued

Variable	1	2	3	4	5	6	7	8
	1950–51							
1. Percent change: Gross hourly earnings	1.0	0.416	−0.389	0.287	0.101	0.311	0.341	0−.099
2. Percent change :Production worker employment		1.0	−.268	.912	.052	.733	.616	.457
3. Percent change: Output per production worker man-hour			1.0	.117	−.415	−.174	.083	.409
4. Percent change: Output				1.0	−.199	.616	.615	.667
5. Percent change: Wholesale price index					1.0	.294	−.066	−.526
6. Average return on equity before taxes						1.0	.885	.304
7. Average return on equity after taxes							1.0	.409
8. Concentration ratio								1.0
	1951–52							
1. Percent change: Gross hourly earnings	1.0	0.055	0.007	−0.036	0.375	0.656	0.723	0.173
2. Percent change: Production worker employment		1.0	.594	.912	.093	.450	.197	.169
3. Percent change: Output per production worker man-hour			1.0	.829	.035	.362	.171	.216
4. Percent change: Output				1.0	−.065	.365	.117	.073
5. Percent change: Wholesale price index					1.0	.536	.624	.581
6. Average return on equity before taxes						1.0	.813	.358
7. Average return on equity after taxes							1.0	.488
8. Concentration ratio								1.0
	1952–53							
1. Percent change: Gross hourly earnings	1.0	0.383	0.203	0.491	0.546	0.725	0.783	0.595
2. Percent change: Production worker employment		1.0	−.204	.837	.275	.666	.525	.201
3. Percent change: Output per production worker man-hour			1.0	.336	−.171	−.094	.094	−053
4. Percent change: Output				1.0	.176	.547	.538	.212
5. Percent change: Wholesale price index					1.0	.490	.432	.595
6. Average return on equity before taxes						1.0	.800	.523
7. Average return on equity after taxes							1.0	.622
8. Concentration ratio								1.0
	1953–54							
1. Percent change: Gross hourly earnings	1.0	0.458	−0.257	0.160	0.620	0.794	0.699	0.517
2. Percent change: Production worker employment		1.0	−.327	.644	−.027	.088	.145	−.058
3. Percent change: Output per production worker man-hour			1.0	.474	−.215	−.023	−.123	−.443
4. Percent change: Output				1.0	−.247	−.018	−.023	−.454
5. Percent change: Wholesale price index					1.0	.715	.505	.387
6. Average return on equity before taxes						1.0	.888	.515
7. Average return on equity after taxes							1.0	.642
8. Concentration ratios								1.0

TABLE B–2.—*Matrixes of simple cross-section correlation coefficients: Wholesales (N=19)*—Continued

Variable	1	2	3	4	5	6	7	8
	1954–55							
1. Percent change: Gross hourly earnings	1.0	0.457	0.081	0.618	0.551	0.655	0.629	0.370
2. Percent change: Production worker employment		1.0	−.218	.691	.751	.505	.340	−.120
3. Percent change: Output per production worker man-hour			1.0	.452	−.201	−.032	.178	.223
4. Percent change: Output				1.0	.587	.469	.449	.161
5. Percent change: Wholesale price index					1.0	.448	.395	.196
6. Average return on equity before taxes						1.0	.868	.413
7. Average return on equity after taxes							1.0	.495
8. Concentration ratios								1.0
	1955–56							
1. Percent change: Gross hourly earnings	1.0	−0.173	0.492	0.264	−0.098	0.037	0.202	0.471
2. Percent change: Production worker employment		1.0	−.170	.731	.614	.449	.312	−.067
3. Percent change: Output per production worker man-hour			1.0	.508	−.418	−.015	.007	.351
4. Percent change: Output				1.0	.283	.358	.299	.274
5. Percent change: Wholesale price index					1.0	.404	.442	.193
6. Average return on equity before taxes						1.0	.853	.513
7. Average return on equity after taxes							1.0	.688
8. Concentration ratios								1.0
	1956–57							
1. Percent change: Gross hourly earnings	1.0	0.390	0.368	0.597	0.551	0.660	0.660	0.541
2. Percent change: Production worker employment		1.0	−.456	.482	.660	.448	.471	.170
3. Percent change: Output per production worker man-hour			1.0	.521	−.100	.283	.241	.359
4. Percent change: Output				1.0	.397	.627	.617	.391
5. Percent change: Wholesale price index					1.0	.585	.711	.617
6. Average return on equity before taxes						1.0	.883	.622
7. Average return on equity after taxes							1.0	.820
8. Concentration ratios								1.0
	1957–58							
1. Percent change: Gross hourly earnings	1.0	−0.411	0.183	−0.172	0.308	0.521	0.598	0.577
2. Percent change: Production worker employment		1.0	.301	.895	−.047	−.024	−.020	−.441
3. Percent change: Output per production worker man-hour			1.0	.677	.329	.531	.398	.007
4. Percent change: Output				1.0	.115	.253	.207	−.281
5. Percent change: Wholesale price index					1.0	.629	.276	−.114
6. Average return on equity before taxes						1.0	.877	.525
7. Average return on equity after taxes							1.0	.753
8. Concentration ratios								1.0

Appendix C

Trends in Individual Industries Relative to All Manufacturing

In order to compare the movements of prices, wages, labor costs, and returns to capital in each 2-digit manufacturing industry, indexes were computed showing the *ratio* between the index of these variables in each industry and the index of the same variables in all manufacturing. The resulting indexes are presented in tables C–1 to C–20. A brief description of each of them follows.

1. Wholesale Price Index = $\frac{\text{Wholesale Price Index: Industry}}{\text{Wholesale Price Index: Manufacturing}}$

The basic wholesale price indexes are given in appendix A.

2. Straight Time Hourly Earnings = $\frac{\text{Index of Straight Time Hourly Earnings: Industry}}{\text{Index of Straight Time Hourly Earnings: Manufacturing}}$

3. Output = $\frac{\text{Index of Output: Industry}}{\text{Index of Output: Manufacturing}}$

The basic indexes of output are given in appendix A.

4. Output Per Total Worker Man-Hour = $\frac{\text{Index of Output per Total Worker Man-Hour: Industry}}{\text{Index of Output per Total Worker Man-Hour: Manufacturing}}$

The basic indexes of output per total worker man-hour are given in appendix A.

5. Direct Labor Costs Per Unit of Output Per Total Worker Man-Hour = $\frac{\text{Index of Direct Labor Costs/Unit of Output/TWMH: Industry}}{\text{Index of Direct Labor Costs/Unit of Output/TWMH: Manufacturing}}$

Direct labor costs were measured by the index of *gross* hourly earnings of *production* workers; no data are available for hourly costs of both production and nonproduction workers. As a result, *the index of direct labor costs probably understates the rate of increase in total labor costs,* since nonproduction workers have increased considerably faster than production workers and since the average hourly compensation rate for nonproduction workers is probably higher than the average gross hourly earnings of production workers.

6. Capital Costs Per Dollar of Sales = $\frac{\text{Index of Profits Plus Depreciation Plus Depletion Per Dollar of Sales: Industry}}{\text{Index of Profits Plus Depreciation Plus Depletion Per Dollar of Sales: Manufacturing}}$

The basic indexes of profits plus depreciation plus depletion per dollar of sales are given in appendix A.

It should be noted that the same limitations discussed in appendix A with regard to comparability of scope and classification method are applicable in equal degree to the data presented here. It should also be noted that one important part of costs—*viz,* costs of materials per unit—are not available. In a few instances, indirect taxes may also represent a fairly important part of the final price not accounted for by the costs included above.

Tables C–1 to C–20 follow.

TABLE C–1.—*Ratios: Food and kindred products to all manufacturing*

	Wholesale Price Index	Straight time hourly earnings	Profits as percent of sales	Output per total worker man-hour	Output	Labor cost per unit of output per total worker man-hour
1947	102.4	99.9	109.8	102.2	101.0	97.9
1948	102.2	99.8	89.3	98.8	96.1	100.7
1949	95.4	100.4	101.2	98.8	103.0	101.5
1950	95.9	101.6	86.6	95.4	92.8	105.2
1951	96.5	100.8	93.8	95.8	87.5	103.8
1952	96.4	102.2	86.5	96.4	87.1	104.5
1953	92.7	102.0	90.3	94.4	81.3	106.7
1954	92.6	103.1	91.0	95.7	88.8	106.6
1955	88.4	104.5	84.6	92.6	82.3	111.2
1956	85.1	103.7	91.5	94.8	82.8	107.9
1957	85.7	104.2	90.2	96.2	82.8	107.2
1958	89.1	105.0	99.6	98.2	91.0	106.3

TABLE C–2.—*Ratios: Tobacco products to all manufacturing*

	Wholesale Price Index	Straight time hourly earnings	Profits as percent of sales	Output per total worker man-hour	Output	Labor cost per unit of output per total worker man-hour
1947	99.7	102.0	85.1	95.8	98.0	106.4
1948	96.0	98.6	102.0	100.0	98.1	98.6
1949	104.6	99.6	114.1	104.5	104.1	95.2
1950	102.8	103.1	97.3	101.9	91.9	100.6
1951	95.6	100.7	98.9	106.6	90.0	93.5
1952	98.6	99.2	102.4	106.3	90.3	92.5
1953	105.6	99.1	116.3	103.7	82.1	94.8
1954	106.2	101.0	120.7	98.0	84.0	102.7
1955	105.0	99.2	119.1	93.7	76.6	106.0
1956	101.3	103.2	125.3	98.1	76.6	104.1
1957	102.6	103.7	138.7	104.6	79.3	98.4
1958	105.2	104.8	159.8	114.6	91.8	91.9

TABLE C–3.—*Ratios: Textiles to all manufacturing*

	Wholesale price index	Straight-time hourly earnings	Profits as percent of sales	Output per total worker man-hour	Output	Labor cost per unit of output per total worker man-hour
1947	103.4	99.1	113.2	98.7	99.0	100.2
1948	102.0	101.3	110.3	99.7	101.9	101.5
1949	94.6	99.6	73.9	101.9	99.0	97.3
1950	97.2	99.5	79.5	98.3	98.2	100.9
1951	100.3	98.8	67.5	99.7	88.3	98.6
1952	87.6	96.1	48.2	101.6	84.7	94.3
1953	84.6	91.2	53.5	101.1	79.9	90.1
1954	80.7	88.6	39.9	104.1	80.0	84.7
1955	80.2	86.3	49.9	103.0	78.0	84.4
1956	76.7	85.3	55.2	105.0	76.6	82.0
1957	74.3	84.5	51.8	105.2	73.1	81.0
1958	70.7	82.2	54.5	108.2	76.9	77.0

TABLE C–4.—*Ratios: Apparel to all manufacturing*

	Wholesale price index	Straight-time hourly earnings	Profits as percent of sales	Output per total worker man-hour	Output	Labor cost per unit of output per total worker man-hour
1947	105.0	104.1	134.0	101.7	97.0	102.6
1948	99.4	100.3	88.7	100.2	99.0	100.2
1949	95.8	96.1	75.3	97.9	104.1	97.8
1950	92.9	94.5	78.2	95.6	97.3	98.3
1951	90.4	94.7	58.6	94.2	88.3	98.9
1952	89.6	89.3	77.8	93.5	89.5	95.6
1953	89.2	86.0	82.3	90.3	84.3	95.5
1954	88.0	86.1	79.2	86.8	87.2	98.5
1955	87.2	82.1	80.2	89.6	85.1	92.0
1956	85.1	84.0	94.6	88.9	83.4	94.5
1957	82.6	82.1	83.4	87.3	82.1	94.6
1958	81.6	80.5	80.9	88.9	87.3	91.4

TABLE C–5.—*Ratios: Lumber to all manufacturing*

	Wholesale price index	Straight time hourly earnings	Profits as percent of sales	Output per total worker man-hour	Output	Labor cost per unit of output per total worker man-hour
1947	97.7	100.5	116.6	97.9	101.0	102.3
1948	103.3	100.3	100.5	102.4	101.9	97.9
1949	98.9	99.3	81.1	98.6	95.9	100.9
1950	109.4	101.5	92.4	101.4	100.9	99.4
1951	107.3	102.4	87.7	97.4	93.3	103.8
1952	106.6	102.2	76.1	99.3	88.7	102.3
1953	106.6	101.4	70.4	103.6	85.1	96.7
1954	103.8	99.0	73.1	107.6	88.8	91.5
1955	107.5	98.3	85.2	105.2	87.2	93.0
1956	104.9	97.6	68.2	102.8	82.1	94.6
1957	96.6	96.1	58.0	105.0	75.2	91.2
1958	94.5	96.6	72.5	109.6	82.1	88.5

TABLE C–6.—*Ratios: Furniture and fixtures to all manufacturing*

	Wholesale price index	Straight time hourly earnings	Profits as percent of sales	Output per total worker man-hour	Output	Labor cost per unit of output per total worker man-hour
1947	99.4	99.9	113.7	101.0	100.0	99.3
1948	98.6	100.1	103.2	99.8	101.0	100.1
1949	102.0	100.1	81.2	99.0	99.0	100.7
1950	102.3	99.1	89.2	94.9	105.4	104.3
1951	102.8	99.7	89.6	94.1	92.5	105.3
1952	102.7	99.8	84.7	93.5	91.9	106.6
1953	103.8	99.3	81.6	92.2	88.8	106.9
1954	103.1	99.0	73.4	103.4	99.2	94.8
1955	103.7	97.7	73.9	101.5	100.0	96.1
1956	105.1	97.8	84.5	100.4	100.0	96.3
1957	106.0	96.4	76.9	97.1	95.9	98.5
1958	106.1	94.8	73.8	96.3	98.5	98.3

TABLE C–7.—*Ratios: Paper and products to all manufacturing*

	Wholesale Price Index	Straight time hourly earnings	Profits as percent of sales	Output per total worker man-hour	Output	Labor cost per unit of output per total worker man-hour
1947	102.8	98.4	116.4	102.1	100.0	96.8
1948	99.1	100.5	93.4	99.6	99.0	100.8
1949	98.2	101.0	89.3	98.2	101.0	102.4
1950	96.9	100.6	92.6	100.8	106.3	100.4
1951	103.5	100.7	106.7	102.6	104.2	97.9
1952	103.2	101.8	102.8	97.2	96.0	104.3
1953	102.9	100.2	95.6	97.3	97.0	103.1
1954	102.3	101.5	96.2	97.6	105.6	103.8
1955	103.7	101.8	88.1	99.1	105.7	103.1
1956	106.4	103.1	89.8	99.0	107.6	103.9
1957	105.2	103.3	83.4	97.7	106.9	105.9
1958	105.2	104.0	87.3	101.7	117.2	102.7

TABLE C–8.—*Ratios: Printing and publishing to all manufacturing*

	Wholesale Price Index	Straight time hourly earnings	Profits as percent of sales	Output per total worker man-hour	Output	Labor cost per unit of output per total worker man-hour
1947	(1)	96.9	108.1	99.8	96.0	97.3
1948	(1)	99.8	94.2	100.3	98.1	99.4
1949	(1)	103.0	97.5	99.5	106.2	103.3
1950	(1)	102.8	81.3	95.5	97.3	106.7
1951	(1)	99.2	94.7	96.9	91.7	101.1
1952	(1)	99.6	98.2	92.8	88.7	106.1
1953	(1)	98.3	98.3	91.1	85.8	106.7
1954	(1)	98.5	96.6	92.3	96.0	106.3
1955	(1)	98.4	89.6	89.1	90.1	109.9
1956	(1)	96.6	94.4	89.4	92.4	106.9
1957	(1)	95.2	94.6	87.4	92.4	108.1
1958	(1)	95.4	95.3	85.6	97.8	111.0

[1] Not available.

TABLE C–9.—*Ratios: Chemicals to all manufacturing*

	Wholesale price index	Straight time hourly earnings	Profits as percent of sales	Output per total worker man-hour	Output	Labor cost per unit of output per total worker man-hour
1947	105.7	98.9	97.9	96.8	96.0	102.1
1948	100.0	99.6	95.4	99.6	100.0	100.0
1949	94.5	101.4	107.4	103.5	104.1	97.9
1950	92.5	102.9	112.3	111.6	111.7	91.8
1951	95.2	102.3	112.6	114.6	115.8	88.8
1952	92.6	102.9	115.9	113.3	116.1	89.8
1953	91.8	103.3	116.9	111.9	114.9	91.8
1954	94.1	104.9	118.0	111.1	122.4	94.2
1955	92.7	105.3	119.1	118.5	126.2	88.8
1956	89.7	106.7	116.7	121.5	131.7	87.1
1957	88.9	106.9	120.8	122.7	137.2	86.7
1958	88.7	107.6	122.5	125.0	148.5	86.1

TABLE C–10.—*Ratios: Petroleum and products to all manufacturing*

	Wholesale price index	Straight time hourly earnings	Profits as percent of sales	Output per total worker man-hour	Output	Labor cost per unit of output per total worker man-hour
1947	93.4	97.0	98.2	101.6	97.0	95.1
1948	108.0	100.9	105.3	101.4	101.0	99.3
1949	98.0	102.0	95.9	95.8	101.0	106.8
1950	106.7	100.2	85.2	100.9	99.1	99.2
1951	94.7	99.9	93.5	106.3	101.7	93.7
1952	98.5	100.5	94.5	102.8	97.6	97.4
1953	99.2	100.2	96.5	103.1	96.3	96.9
1954	95.9	100.1	97.1	98.6	98.4	101.7
1955	96.7	100.3	89.5	101.9	95.7	98.5
1956	98.3	102.7	93.7	103.9	96.6	98.8
1957	102.1	102.0	90.7	102.6	95.9	99.7
1958	92.2	102.4	91.7	100.5	97.0	102.3

TABLE C–11.—*Ratios: Rubber and products to all manufacturing*

	Wholesale price index	Straight time hourly earnings	Profits as percent of sales	Output per total worker man-hour	Output	Labor cost per unit of output per total worker man-hour
1947	102.2	103.1	106.7	100.9	106.0	102.0
1948	98.1	99.1	100.1	100.3	99.0	98.4
1949	99.9	98.3	92.4	99.9	95.9	98.7
1950	107.6	97.5	107.2	99.4	100.0	99.1
1951	114.7	97.2	118.4	98.0	96.7	99.4
1952	113.7	99.8	113.6	95.2	94.4	105.5
1953	111.4	99.2	109.5	96.1	94.0	103.9
1954	112.3	99.0	109.3	99.3	94.4	100.3
1955	121.9	99.7	103.1	96.4	97.9	105.6
1956	121.8	100.2	106.4	94.0	91.0	106.8
1957	118.9	98.9	108.7	93.1	91.0	107.3
1958	119.0	100.4	117.8	94.7	91.8	106.7

TABLE C–12.—*Ratios: Leather and products to all manufacturing*

	Wholesale Price Index	Straight time hourly earnings	Profits as percent of sales	Output per total worker man-hour	Output	Labor cost per unit of output per total worker man-hour
1947	103.8	102.6	124.3	103.8	105.0	98.7
1948	98.4	100.1	94.0	98.8	97.1	101.1
1949	98.1	97.7	79.8	97.3	97.9	100.6
1950	100.8	98.6	95.7	96.2	93.7	101.3
1951	104.3	97.4	74.5	98.8	80.8	97.4
1952	91.9	96.3	106.6	95.3	83.9	100.1
1953	92.5	94.1	109.4	92.6	77.6	100.8
1954	89.4	92.1	116.2	95.1	82.4	96.5
1955	88.2	91.1	117.8	92.1	79.4	98.1
1956	89.9	91.8	93.8	93.4	78.6	97.2
1957	87.7	90.2	102.1	93.7	77.9	95.7
1958	87.6	88.9	102.4	93.5	81.3	95.0

TABLE C–13.—*Ratios: Stone, clay, and glass products to all manufacturing*

	Wholesale price index	Straight time hourly earnings	Profits as percent of sales	Output per total worker man-hour	Output	Labor cost per unit of output per total worker man-hour
1947	96.7	99.5	92.5	100.5	99.0	99.0
1948	97.4	99.7	96.9	100.4	101.0	99.3
1949	103.2	100.9	111.9	98.9	100.0	101.8
1950	105.0	101.1	110.7	102.3	105.4	98.9
1951	101.6	100.2	111.5	105.3	107.5	94.9
1952	104.6	99.8	110.5	102.6	99.2	96.9
1953	109.6	100.6	110.2	99.6	94.0	100.7
1954	112.0	100.7	113.8	99.8	97.6	100.9
1955	114.3	101.9	113.3	99.0	98.6	103.0
1956	116.3	102.0	116.9	99.4	100.0	102.7
1957	117.5	102.1	117.3	99.2	98.6	102.9
1958	120.1	101.6	125.2	100.1	100.7	102.5

TABLE C–14.—*Ratios: Primary metals to all manufacturing*

	Wholesale price index	Straight time hourly earnings	Profits as percent of sales	Output per total worker man-hour	Output	Labor cost per unit of output per total worker man-hour
1947	94.3	99.5	95.2	102.1	103.0	97.4
1948	99.0	99.7	100.1	100.9	103.9	99.0
1949	106.5	100.8	105.1	96.8	92.8	103.8
1950	107.3	99.3	108.2	99.4	102.7	100.4
1951	107.2	100.3	113.0	98.8	104.2	102.2
1952	110.8	100.9	97.1	94.4	91.1	107.0
1953	117.3	102.7	112.8	96.8	97.0	106.6
1954	119.7	102.8	112.2	91.0	84.8	112.4
1955	126.1	104.8	116.0	96.9	97.2	109.1
1956	132.1	105.8	115.3	92.2	93.1	114.6
1957	132.3	107.1	112.9	89.9	89.7	119.2
1958	131.9	110.8	110.4	84.7	76.1	130.1

TABLE C–15.—*Ratios: Fabricated metal products to all manufacturing*

	Wholesale price index	Straight time hourly earnings	Profits as percent of sales	Output per total worker man-hour	Output	Labor cost per unit of output per total worker man-hour
1947	94.7	99.2	107.1	100.4	102.0	99.1
1948	98.7	99.6	99.7	100.5	101.0	99.3
1949	106.4	101.1	92.4	98.1	95.9	102.6
1950	106.1	100.5	95.5	97.6	102.7	103.4
1951	105.3	99.7	99.2	95.3	100.8	105.1
1952	106.8	100.2	87.7	91.4	94.4	110.1
1953	108.5	100.0	81.1	91.2	98.5	110.6
1954	109.1	101.0	74.0	88.8	95.2	114.0
1955	111.3	100.9	74.6	85.2	92.2	119.4
1956	113.8	101.1	73.1	83.4	89.7	121.0
1957	115.1	101.5	74.1	83.4	91.7	121.8
1958	114.5	102.7	75.6	84.1	91.0	122.2

TABLE C–16.—*Ratios: Machinery, except electrical, to all manufacturing*

	Wholesale price index	Straight time hourly earnings	Profits as percent of sales	Output per total worker man-hour	Output	Labor cost per unit of output per total worker man-hour
1947	96.4	100.2	100.9	101.0	104.0	99.0
1948	97.4	99.3	97.5	100.1	102.9	99.6
1949	106.3	100.6	101.8	98.9	92.8	101.2
1950	105.9	100.5	96.7	98.4	92.8	102.3
1951	106.1	100.1	103.8	98.5	104.2	103.0
1952	109.0	101.4	104.3	99.4	107.3	102.9
1953	111.4	100.9	93.1	99.2	103.7	102.4
1954	112.4	102.2	91.5	93.9	95.2	108.5
1955	115.9	101.4	89.4	91.1	90.8	112.0
1956	120.7	102.4	97.3	91.2	98.6	112.2
1957	124.6	102.4	96.2	86.0	93.1	118.5
1958	126.2	103.4	95.0	84.8	85.1	120.8

TABLE C–17.—*Ratios: Electrical machinery to all manufacturing*

	Wholesale Price Index	Straight time hourly earnings	Profits as percent of sales	Output per total worker man-hour	Output	Labor cost per unit of output per total worker man-hour
1947	100.4	100.2	99.2	98.2	103.0	101.8
1948	97.8	99.9	96.7	99.6	99.0	100.3
1949	101.9	100.0	104.6	102.7	97.9	97.4
1950	99.6	97.3	116.0	100.0	104.5	97.9
1951	100.6	97.0	111.9	97.3	107.5	100.0
1952	103.6	97.7	112.5	106.6	125.8	91.8
1953	106.7	97.1	102.7	103.1	129.9	94.5
1954	105.8	98.2	95.4	105.1	127.2	93.5
1955	107.3	97.6	82.9	104.5	124.8	93.7
1956	111.5	98.1	79.8	105.9	134.5	92.4
1957	113.4	98.1	92.3	104.0	135.2	94.1
1958	113.0	99.0	95.0	99.1	128.4	99.7

TABLE C–18.—*Ratios: Transportation equipment to all manufacturing*

	Wholesale Price Index	Straight time hourly earnings	Profits as percent of sales	Output per total worker man-hour	Output	Labor cost per unit of output per total worker man-hour
1947	(1)	100.1	84.4	95.1	94.0	104.7
1948	(1)	99.9	97.3	100.9	99.0	98.7
1949	(1)	100.1	120.3	102.7	106.2	96.0
1950	(1)	100.3	119.7	103.7	108.1	97.3
1951	(1)	98.7	97.3	98.6	112.5	100.5
1952	(1)	98.6	105.0	94.9	121.8	105.4
1953	(1)	98.3	93.3	98.1	138.1	101.6
1954	(1)	98.8	95.8	99.2	134.4	101.0
1955	(1)	98.8	109.9	103.3	142.6	97.9
1956	(1)	98.6	89.7	100.6	134.5	98.8
1957	(1)	98.7	95.0	105.2	146.2	94.3
1958	(1)	100.2	82.3	104.8	134.3	96.5

[1] Not available.

TABLE C–19.—*Ratios: Motor vehicles and equipment to all manufacturing*

	Wholesale price index	Straight time hourly earnings	Profits as percent of sales	Output per total worker man-hour	Output	Labor cost per unit of output per total worker man-hour
1947	95.2	99.4	88.7	(1)	95.0	(1)
1948	97.1	99.7	94.8	(1)	98.0	(1)
1949	107.6	100.9	118.4	(1)	107.2	(1)
1950	103.0	99.9	115.2	(1)	117.9	(1)
1951	97.7	100.9	93.9	(1)	100.0	(1)
1952	105.9	101.1	105.7	(1)	81.6	(1)
1953	105.4	99.5	92.3	(1)	92.6	(1)
1954	104.9	99.5	97.8	(1)	85.8	(1)
1955	106.9	98.9	112.4	(1)	107.7	(1)
1956	108.6	98.6	91.7	(1)	85.0	(1)
1957	109.9	98.3	100.2	(1)	87.1	(1)
1958	112.2	99.3	86.6	(1)	72.8	(1)

[1] Not available.

TABLE C–20.—*Ratios: Instruments and related products to all manufacturing*

	Wholesale price index	Straight time hourly earnings	Profits as percent of sales	Output per total worker man-hour	Output	Labor cost per unit of output per total worker man-hour
1947	(1)	99.5	(1)	101.6	103.0	98.0
1948	(1)	100.2	(1)	101.4	101.0	98.3
1949	(1)	100.5	(1)	96.9	95.9	103.9
1950	(1)	101.3	(1)	98.0	97.3	103.8
1951	(1)	102.2	(1)	94.9	103.3	108.5
1952	(1)	103.5	(1)	104.2	119.4	99.9
1953	(1)	100.9	(1)	102.7	120.1	99.0
1954	(1)	102.1	(1)	104.1	124.8	98.0
1955	(1)	102.6	(1)	103.4	118.4	99.3
1956	(1)	102.5	(1)	104.0	123.4	98.6
1957	(1)	103.0	(1)	105.0	126.9	98.0
1958	(1)	103.4	(1)	105.0	129.1	98.9

[1] Not available.

TECHNICAL NOTE NO. 1
THE SERVICE SECTOR: DATA ON OUTPUT, EMPLOYMENT, PRICES, AND INCOME

(By George W. Bleile)

TECHNICAL NOTE 1

THE SERVICE SECTOR: DATA ON OUTPUT, EMPLOYMENT, PRICES, AND INCOMES

By George W. Bleile

The purpose of this note is to present more fully some of the data which were developed during the investigation of inflation and growth in the service sector. The major findings have been reported in chapters 3 and 5 of the Joint Economic Committee "Staff Report on Employment, Growth, and Price Levels" (Washington, 1959).

The note is in three parts. Part 1 contains data on an aggregate basis for the entire service sector including finance and insurance, transportation, utilities, professional and other personal services. The second part presents more specific data for industries in three broad service groups: medical care, transportation and public utilities, and other nonprofessional services. Part 3 is a description of data and a report of preliminary analysis of prices and wages carried out on a cross section of large cities.

PART 1. THE SERVICE SECTOR IN THE AGGREGATE

I. Output

A. THE POSTWAR RECORD

The output of services in the private domestic economy increased nearly 50 percent in the postwar period. The rate of increase was rather steady at about 3.5 percent per year, although there was some acceleration in the rate of increase in the last part of the period.

Two sets of data are available which measure services output. One set presents deflated expenditure data; the other shows gross product originating (GPO) aggregated on an industry basis. The expenditure data is the service portion of personal consumption expenditure and includes purchases by households and private, nonprofit institutions. [1]

The gross product originating data is taken from Charles L. Schultze's monograph "Prices, Costs, and Output" and is based on estimates of net national income originating by industry. [2]

While the two sets of data should not be expected to match perfectly because of the differences in concept and scope, there is broad correspondence. The household operation expenditure category corresponds roughly to the public utility and communication industries; transportation generally with railroad and other transportation industries; and the other services-expenditure category with the personal services industry.[3] The other services category includes medical care, personal care, recreation, business services, and expenditure by private nonprofit groups.[4] Both sets of data omit housing because the major portion of housing "expenditure," and the major portion of the "output" of the real estate industry is imputed rental value of owner-occupied houses. Homeowners are assumed to be in the real estate business renting to themselves.[5]

[1] The basic source for this data is U.S. Department of Commerce, "U.S. Income and Output," a supplement to the Survey of Current Business, Washington, 1959. Table II-5. The personal consumption category accounts for about 70 percent of all service output. The rest, flowing to Government primarily, is outside the scope of this discussion.

[2] Charles L. Schultze, "Prices, Costs, and Output for the Postwar Decade: 1947-57," published by Committee for Economic Development, January 1960. See especially table 2, p. 29. A discussion of the methods used in estimating the indexes is included there.

[3] The "service industry" itself is an aggregate. A listing of its components is presented in the appendix. When the term "service sector" is used we mean the "service industries" plus the finance and insurancer transportation, communication, and public utilities industries.

[4] See appendix for a listing of the coverage of service sector as defined for Department of Commerce expenditure data.

[5] See Schultze, op. cit., p. 28.

The expenditure data sums to the total real services (less housing) consumed in the household sector. The gross product originating data summed over all industries equals gross national output originating in the private domestic economy (less the real estate industry). Comparison of the consumption of services with total consumption measures the relative importance of the service sector in final real consumer demand. Compensation of the GPO in the service sector with total private gross product originating, measures the relative importance of the service sector as a user of resources.

Table 1 below shows the percentage increases in output of services in the private economy.

TABLE 1.—*Real output of services*

[Index: 1947=100]

Year	Real consumption expenditure data [1]		Business gross national product [2]	Gross product originating [2]	
	Total services less housing	Other services		Service sector	Personal services industries
1947	100.0	100.0	100.0	100.0	100.0
1948	102.8	103.0	103.6	102.2	103.3
1949	104.3	105.0	101.9	100.7	102.9
1950	109.3	110.0	111.5	109.1	106.0
1951	112.3	111.0	118.9	114.5	108.3
1952	115.3	113.7	122.5	119.2	111.4
1953	119.4	118.3	129.0	123.6	113.9
1954	123.3	123.7	125.9	125.6	117.5
1955	130.9	130.0	137.7	134.8	123.1
1956	138.6	137.7	139.9	144.2	131.5
1957	142.7	141.3	141.9	149.1	136.1
1958	147.2	146.3	[3]	[3]	[3]

[1] Real personal consumption expenditure, "U.S. Income and Output," table II-5.
[2] Charles L. Schultze, "Prices, Costs, and Output," table 2, p. 29. The service sector is an aggregation, using 1947 net national income originating weights, of the following industries: finance and insurance, communication, public utilities, railroads, other transportation, and personal services industries. Business GNP excludes output originating in Government and real estate.
[3] Not available.

Table 2 presents average annual rates of increase in the service sector. Both the real consumption expenditures and gross output originating estimates are given.

TABLE 2.—*Service sector output: Average annual rates of change, selected years, 1947–58*

[Percentage rates]

Period	Services less housing [1]	Service sector [2]	Period	Services less housing [1]	Service sector [2]
1947–57	3.6	4.1	1953–57	4.5	4.8
1947–58	3.6	[3]	1953–58	4.3	[3]
1947–53	3.0	3.6	1955–57	4.4	5.2
1947–55	3.4	3.8	1955–58	4.0	[3]

[1] Real consumption expenditure data.
[2] Gross product originating data.
[3] GPO data not available for 1958.

Source of data in table 1. Compound interest computed from base and terminal year values.

B. THE INCREASED RELATIVE IMPORTANCE OF SERVICES

1. *The share of services in consumption*

Evidence of the increased relative importance of the service sector in consumption is presented in the tables below. Real consumption of services less housing as a share of total consumption increased from 23.7 percent in 1947 to 25.0 percent in 1958. This is a 5.5 percent increase in relative importance most of which accrued in the last few years. (See table 3.) The same pattern is

present in the ratio of "other services" to consumption. It is this category which contains most of the expenditures for the traditional personal services such as medical care, personal care, laundry and dry cleaning, recreation and the like. While the changes in the ratio are small, the magnitudes involved are large, and the offsetting effects in durable goods demand significant.

TABLE 3.—*Percentage distribution of personal consumption, constant dollars*

[Percent of total consumption]

Year	Durable goods	Nondurable goods	Services total	Services less housing	Housing	Household operation	Transportation	Other services
1947	11.9	53.8	34.3	23.7	10.5	4.4	3.9	15.3
1948	12.3	52.7	34.9	23.9	11.0	4.6	3.9	15.5
1949	12.9	52.0	35.1	23.7	11.4	4.6	3.7	15.4
1950	14.8	50.4	34.8	23.4	11.4	4.7	3.5	15.2
1951	13.4	50.9	35.8	23.8	11.9	5.0	3.6	15.2
1952	12.7	51.3	36.0	23.9	12.2	5.0	3.6	15.2
1953	14.1	50.3	35.6	23.6	12.0	5.0	3.5	15.1
1954	13.6	50.1	36.3	24.0	12.2	5.1	3.3	15.6
1955	15.5	49.0	35.5	23.7	11.8	5.3	3.2	15.2
1956	14.4	49.3	36.3	24.3	12.0	5.5	3.1	15.6
1957	14.2	49.0	36.9	25.2	11.7	5.7	3.1	15.7
1958	13.1	48.9	38.0	25.0	13.0	5.9	3.0	16.1

Source: U.S. Income and Output; table II-5.

Examination of this data emphasizes the cyclical stability of services consumption. During recession years the share of total consumption accounted for by services typically increases because total consumption declines more than service consumption. In 1948–49 and again in 1954 there was a bulge in the ratio of services to total consumption which is especially noticeable. It is striking that the ratio increased in 1956 and 1957 as well as in the recession years 1954 and 1958.

In general the same behavior can be observed when the ratio of total services (including Government) to total gross national product is examined. The ratio fluctuates very closely around 33 percent except in 1949, 1952, 1954, and 1956–58. The increase in the importance of services in 1949 and 1954 is the recession effect mentioned above. The 1952 increase was due to the abnormal Government service requirements associated with the Korean war and does not show up in the personal consumption ratio.

In contrast with the real consumption data discussed above, current dollar expenditure data show a rather steady increase in share spent in the service sector year after year. There is a trend like progression from 21.7 percent of consumption expenditures to 25.7. (See table 4.)

TABLE 4.—*Percentage distribution of personal consumption expenditures, current dollars*

[Percent of total consumption expenditures]

Year	Durable goods	Nondurable goods	Services, total	Services less housing	Housing	Household operation	Transportation	Medical care	Other
1947	12.4	56.5	31.1	21.7	9.4	4.5	3.3	4.6	9.2
1948	12.7	55.3	31.9	22.0	9.9	4.4	3.4	4.9	9.4
1949	13.6	53.3	33.1	22.5	10.6	4.6	3.4	5.0	9.5
1950	15.6	51.2	33.3	22.4	10.9	4.8	3.2	5.0	9.4
1951	14.1	50.1	33.5	22.5	11.0	4.8	3.3	5.0	9.2
1952	13.2	52.4	34.4	22.9	11.5	4.9	3.4	5.1	9.5
1953	14.1	50.7	35.2	23.4	11.8	5.0	3.4	5.2	9.6
1954	13.6	50.1	36.3	24.1	12.2	5.1	3.3	5.5	10.1
1955	15.4	48.6	36.0	24.1	11.9	5.2	3.2	5.4	10.1
1956	14.2	48.7	37.0	24.9	12.1	5.5	3.2	5.7	10.5
1957	14.0	48.3	37.5	25.1	12.4	5.5	3.1	5.8	10.7
1958	12.8	48.4	38.7	25.7	13.0	5.8	3.1	(1)	16.9

[1] Included in "Other."

Source: "U.S. Input and Output," table II-6.

2. The share of the service sector in the private domestic economy

The data presenting gross product originating by industry also shows a shift in the relative importance of services. Tabulated in table 5 is the relative importance of the major industrial groups for 1947–57. The service sector as an aggregate increased from 24 to 25.4 percent from 1947 to 1957; and from 23.2 percent in 1953 when the manufacturing industries, reaching their postwar peak importance, supplied both consumers and the Military Establishment with goods.

TABLE 5.—*Gross output originating in the private domestic economy, percentage distribution by industry 1947–57*

	1947	1948	1949	1950	1951	1952	1953	1954	1955	1956	1957
Agriculture	11.5	12.6	12.5	11.8	10.5	10.5	10.3	11.1	10.7	10.1	9.9
Mining	2.5	2.5	2.3	2.3	2.4	2.3	2.2	2.2	2.2	2.2	2.2
Contract construction	5.0	5.3	5.5	5.6	6.0	5.8	5.6	5.9	5.7	5.7	5.6
Manufacturing	34.9	34.3	33.2	34.3	35.8	35.7	37.2	34.6	35.8	35.6	35.0
Wholesale trade	6.9	6.7	6.8	7.0	7.0	7.0	6.7	6.7	6.6	6.6	6.4
Retail trade	15.2	15.0	15.5	15.6	14.9	15.1	14.9	15.4	15.3	15.2	15.4
Finance and insurance	2.9	2.8	3.0	3.2	3.0	3.5	3.5	3.7	3.6	3.7	3.9
Rail transportation	3.7	3.4	3.0	2.9	3.0	2.7	2.6	2.4	2.5	2.5	2.3
Other transportation	3.1	3.1	3.2	3.3	3.4	3.3	3.4	3.4	3.4	3.6	3.7
Communications	1.4	1.5	1.6	1.5	1.5	1.6	1.6	1.7	1.7	1.8	1.9
Public utilities	1.7	1.7	1.9	1.9	2.1	2.2	2.2	2.4	2.4	2.6	2.8
Services [1]	11.2	11.1	11.5	10.6	10.3	10.3	9.9	10.5	10.1	10.5	10.8
Total private domestic economy [2]	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Addenda:											
Goods sector	53.9	54.7	53.5	54.0	54.7	54.3	55.3	53.8	54.4	53.6	52.7
Less agriculture	(42.4)	(42.1)	(42.0)	(42.2)	(44.2)	(43.8)	(45.0)	(42.7)	(43.7)	(43.5)	(42.8)
Service sector	24.0	23.6	24.2	23.4	23.3	23.6	23.2	24.1	23.7	24.7	25.4
Services industries [1]	(11.2)	(11.1)	(11.5)	(10.6)	(10.3)	(10.3)	(9.9)	(10.5)	(10.1)	(10.5)	(10.8)
Other services [3]	(12.8)	(12.5)	(12.7)	(12.8)	(13.0)	(13.3)	(13.3)	(13.6)	(13.6)	(14.2)	(14.6)
Commercial sector	22.1	21.7	22.3	22.6	21.9	22.1	21.6	22.1	21.9	21.8	21.8

[1] See definition in appendix.
[2] The real estate industry has been omitted. May not add because of rounding.
[3] Finance and insurance, rail and other transportation, communications, public utilities.

Source: Charles L. Schultze, "Prices, Costs and Output," table 2 and "U.S. Income and Output" table I-10. The table was constructed by aggregating the Schultze real output indexes using 1947 net national income originating weights.

A 1.4 percentage point increase in relative importance may appear to be small, but the nonagricultural goods producing industries in the aggregate increased in relative importance only 0.4 points. The relative importance of services was 5.8 percent greater in 1957 than in 1947. In comparison, the relative importance of manufacturing was less than 1 percent greater and the relative importance of agriculture declined 14 percent.

II. EMPLOYMENT

A. THE POSTWAR RECORD

Employment in the service sector has increased at a fairly constant rate with some acceleration near the end of the period. Total employment was little affected by the general business cycle; service sector employment dipped much less than employment in nonservice sectors. In fact, the average number of full-time and part-time employees in the service industries increased during the 1948–49 and the 1957–58 recessions and remained constant in 1954.

Table 6 below presents in index number form the record of employment in the service sector. The left-hand panel shows the average number of full-time and part-time wage and salary employees; the right-hand panel shows full-time equivalent persons participating in production.[6] Comparison of the index of employ-

[6] The two concepts differ as follows: the first series measures the average number of full-time and part-time jobs filled during the year by wage and salary earners. The second series measures man-years of full-time employment by persons working for wages or salaries and by active proprietors of unincorporated enterprises devoting a major portion of their time to the business. This series falls short of measuring total man-years by excluding unpaid family workers. It falls short of measuring total number of persons holding jobs because part-time employee is counted as a fraction of a full-time employee.

Both series are shown here because both part-time employment and participation by proprietors are important in the service sector. A single series showing both together is not available.

Primary reliance is not placed on the Bureau of Labor Statistics data for aggregate service and miscellaneous employment because that series does not cover household workers and because detail for the "miscellaneous" part is not available. The BLS series and the first series referred to above move in very close harmony, however.

(See footnotes to tables VI–13, VI–14, and VI–16 in "U.S. Income and Output" for further discussion.)

ment in the private domestic economy (less real estate) with employment in the service sector demonstrates the relative insensitivity of the sector to recession. When the service industries alone are considered, the insensitivity to recession is even more pronounced.

TABLE 6.—*Employment in the service sector*

[Index: 1947=100]

	Number of full- and part-time wage and salary workers			Full-time equivalent persons participating in production		
	Total private domestic economy	Service sector	Service industries	Total private domestic economy	Service sector	Service industries
1947	100.0	100.0	100.0	100.0	100.0	100.0
1948	102.1	101.8	101.8	101.7	101.7	101.6
1949	98.3	100.9	102.5	98.3	100.4	101.3
1950	101.7	104.4	107.5	100.8	102.9	104.5
1951	107.6	108.7	111.0	105.1	106.7	107.0
1952	108.9	109.6	111.3	106.2	107.6	107.3
1953	111.8	111.9	113.6	108.2	109.4	108.9
1954	108.1	110.7	113.6	105.1	108.1	107.9
1955	111.9	116.0	121.4	108.2	112.5	113.8
1956	115.9	121.7	128.9	111.1	117.2	119.5
1957	116.4	124.1	132.3	111.3	119.8	122.8
1958	112.6	123.9	135.4	107.7	119.1	124.4

Source: Full- and part-time workers "U.S. Income and Output," table VI–14, includes wage and salary workers only.

Full-time equivalent persons participating in production, "U.S. Income and Output," table VI–16, includes active proprietors of unincorporated enterprises as well as wage and salary workers. Full-time equivalent employment means that part-time workers are counted as a fraction of 1 full-time employee. For example, 2 half-time employees would be counted as 1 full-time equivalent employee.

NOTE.—The service sector includes the finance, transportation, and utility industries plus the service industries which are defined in the appendix.

The indexes of full-time equivalent persons participating in production shows, in general, the same patterns.

Table 7 lists the average annual percentage increase in employment in the total private economy, the service sector, and the services industries. Employment in services increased on the average faster than in the total economy.

TABLE 7.—*Employment: Average annual rates of change, selected periods, 1947–58*

[Average annual percentage rates]

	Average number of wage or salary workers			Number of persons engaged in production		
	Service sector	Service industries	Total private domestic economy	Service sector	Service industries	Total private domestic economy
1947–57	2.2	2.8	1.5	1.8	2.1	1.1
1947–58	2.0	2.8	1.1	1.6	2.0	.7
1947–53	1.9	2.2	1.9	1.5	1.4	1.3
1947–55	1.9	2.5	1.4	1.5	1.6	1.0
1953–57	2.6	3.9	1.0	2.3	3.1	.7
1953–58	2.1	3.6	.1	1.7	2.7	−.1
1955–57	3.4	4.4	2.0	3.2	3.8	1.5
1955–58	2.2	3.7	.2	1.9	3.0	−.1

Source: "U.S. Income and Output," table VI–14 and VI–16. Compound interest rates computed from base and terminal year values.

NOTE.—The service sector includes the finance, transportation, and utility industries plus the service industries which are defined in the appendix.

Employment figures, unlike gross output originating data, are available in some detail for the service industries. Table 8 lists such detail as is possible in index number form for ease of comparison.

TABLE 8.—*Service sector: Average number of full- and part-time employees, 1947–58*

[Base: 1947=100]

	Finance, insurance and real estate	Railroads	Local railroads and bus lines	Highway freight	Air transportation	Telephone and telegraph	Utilities, electricity and gas	Hotels	Personal services	Private households
1947	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1948	103.7	97.4	86.4	104.5	96.4	107.8	107.7	99.0	98.7	99.8
1949	105.2	87.4	83.9	104.0	95.2	107.0	110.7	96.3	96.2	101.6
1950	109.7	89.0	79.3	113.7	95.2	103.7	112.2	95.5	96.2	112.7
1951	114.7	92.9	76.3	124.2	103.6	107.8	114.1	98.8	97.9	114.0
1952	118.7	89.6	73.2	128.2	118.1	111.8	115.8	100.8	97.8	108.2
1953	123.2	88.1	71.2	134.2	126.5	115.7	118.1	102.9	97.4	109.5
1954	127.5	78.2	67.7	132.2	126.5	114.8	119.2	101.4	96.4	105.0
1955	133.7	77.6	62.6	140.7	137.4	116.6	120.0	102.9	97.1	120.8
1956	139.3	76.7	58.6	147.7	157.9	123.6	122.4	105.3	98.8	129.4
1957	142.5	72.4	56.6	149.5	174.7	130.0	123.4	107.0	98.8	129.2
1958	145.4	62.2	53.5	144.8	173.5	120.1	123.6	105.5	97.5	134.8

	Miscellaneous repair	Motion pictures	Medical services	Legal services	Commercial and trade schools	Business services	Amusements and recreation	Engineering and other	Educational services	Nonprofit membership organizations
1947	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1948	96.4	98.4	106.4	97.4	110.8	105.5	104.8	114.0	110.1	102.2
1949	90.6	98.8	110.3	98.3	118.9	104.5	103.4	109.7	114.8	104.0
1950	92.1	98.0	118.9	102.6	127.0	108.4	102.4	111.8	116.6	106.7
1951	102.9	97.6	127.9	107.0	127.0	116.8	101.4	140.9	116.9	110.9
1952	110.1	95.7	133.8	107.8	113.5	125.8	100.0	166.7	117.5	113.4
1953	108.6	92.5	141.0	110.3	108.1	134.2	101.0	177.4	120.8	116.0
1954	103.6	91.3	150.0	112.1	110.8	137.9	100.3	175.3	125.8	117.9
1955	110.8	90.5	158.6	112.9	116.2	149.2	103.1	193.5	132.6	119.4
1956	119.4	88.6	169.3	113.8	132.4	165.5	104.8	236.6	141.8	127.4
1957	125.9	84.2	178.5	113.8	143.2	180.0	105.5	249.5	150.1	133.6
1958	120.8	77.5	186.7	119.8	135.1	186.3	107.6	238.7	155.8	138.1

Source: "U.S. Income and Output," table VI-14, p. 212.

B. THE SHIFT IN RELATIVE IMPORTANCE OF SERVICE EMPLOYMENT

The increase in the relative importance of service employment in the economy can be demonstrated in two ways: First by an analysis of which industries or sectors absorbed the increase in total employment; second by analyzing the proportion contributed by each industry to total private domestic employment.

1. Analysis of the increase in employment

Analysis of the net increase in the average number of full-time and part-time employees indicates the following (see table 9):

TABLE 9.—*Analysis of sectoral contributions to increases in employment, selected periods 1947–58*

Period	Net increase total private domestic economy[1]	Service sector			Nonservice sector			
		Total	Service industries	Other service sector	Total	Trade	Agriculture	Industrial
	Increase (in thousands)							
1947–57	6,898	2,833	2,035	798	4,065	2,105	−359	2,319
1947–58	5,280	2,817	2,231	586	2,463	1,969	−308	802
1947–53	4,945	1,397	862	535	3,548	1,305	−325	2,568
1947–55	5,010	1,884	1,351	533	3,126	1,532	−363	1,957
1953–57	1,953	1,436	1,173	263	517	800	−34	−249
1953–58	335	1,420	1,369	51	−1,085	664	17	−1,766
1955–57	1,888	949	684	265	939	573	4	362
1955–58	270	933	880	53	−663	437	55	−1,155
	Increase (in percentage)							
1947–57	100.0	41.1	29.5	11.6	58.9	30.5	−5.2	33.6
1947–58	100.0	53.4	42.3	11.1	46.6	37.3	−5.8	15.2
1947–53	100.0	28.3	17.4	10.8	71.7	26.4	−6.6	51.9
1947–55	100.0	37.6	27.0	10.6	62.4	30.6	−7.2	39.1
1953–57	100.0	73.5	60.1	12.5	26.5	41.0	−1.7	−12.7
1953–58	100.0	423.9	408.7	15.2	−323.9	198.2	5.1	−527.2
1955–57	100.0	50.3	36.2	14.0	49.7	30.3	.2	19.2
1955–58	100.0	345.5	325.9	19.6	−245.6	161.9	20.4	−427.8

[1] Full- and part-time employees. Wage or salary workers.

Source: "U.S. Income and Output," table VI–14.

(*a*) Of the nearly 6.9 million increase in employment in the private domestic economy between 1947 and 1957, the service sector absorbed 41 percent, the commercial sector (wholesale and retail trade) 30 percent, the industrial sector (mining, manufacturing, and construction) about 34 percent and agriculture lost about 5 percent.

(*b*) From 1955 to 1957, the industrial sector absorbed 19 percent of the nearly 1.9 million increase while the service sector took over 50 percent and trade 30 percent.

(*c*) From 1953–57, the service sector absorbed 73 percent of the total increase in employment, trade 41 percent; but agriculture and the industrial sector contributed over 280,000 persons (or 14 percent of the net increase) who had to be reemployed in some other sector.

2. The shift to service employment as a proportion of total man-years of labor used

Table 10 makes use of data for the full-time equivalent labor input of wage or salary workers and active proprietors in the private domestic economy (less real estate).

TABLE 10.—*Persons participating in production—Percentage distribution by industry, 1947–58*

	1947	1948	1949	1950	1951	1952	1953	1954	1955	1956	1957	1958
Agriculture	14.0	13.9	13.8	12.9	11.6	11.2	10.8	11.1	10.6	10.1	9.8	9.9
Mining	1.9	2.0	1.9	1.9	1.8	1.8	1.6	1.6	1.5	1.5	1.5	1.4
Contract construction	6.0	6.4	6.3	6.7	7.1	7.1	7.0	7.2	7.4	7.5	7.4	7.4
Manufacturing	30.6	30.2	29.0	29.9	30.9	31.2	32.1	30.7	30.9	30.7	30.4	29.0
Wholesale, retail trade	21.8	22.1	22.8	22.5	22.5	22.7	22.6	23.0	22.9	23.0	23.2	23.8
Finance and insurance	2.6	2.6	2.8	2.8	2.9	3.0	3.1	3.4	3.4	3.5	3.6	3.8
Railroads	3.1	2.9	2.7	2.7	2.7	2.6	2.5	2.3	2.2	2.1	2.0	1.8
Other transportation	2.9	2.9	3.0	2.9	3.0	3.0	3.0	3.0	3.0	3.0	3.1	3.1
Communication	1.4	1.4	1.5	1.4	1.4	1.5	1.5	1.5	1.5	1.6	1.6	1.6
Public utilities	1.0	1.0	1.1	1.1	1.1	1.0	1.1	1.1	1.1	1.1	1.1	1.1
Services [1]	14.7	14.6	15.1	15.2	14.9	14.8	14.7	15.1	15.5	15.8	16.2	17.0
Total private domestic economy [2]	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Addenda:												
Goods sector	52.5	52.5	51.0	51.4	51.4	51.3	51.5	50.6	50.4	49.8	49.1	47.7
Less agriculture	(38.5)	(38.6)	(37.2)	(38.5)	(39.8)	(40.1)	(40.7)	(39.5)	(39.8)	(39.7)	(39.3)	(37.8)
Service sector	25.7	25.4	26.2	26.1	26.0	25.9	25.9	26.4	26.7	27.1	27.6	28.4
Service industries [1]	(14.7)	(14.6)	(15.1)	(15.2)	(14.9)	(14.8)	(14.7)	(15.1)	(15.5)	(15.8)	(16.2)	(17.0)
Other services [3]	(11.0)	(9.8)	(11.1)	(10.9)	(11.1)	(11.1)	(11.2)	(11.3)	(11.2)	(11.3)	(11.4)	(11.4)
Commercial sector	21.8	22.1	22.8	22.5	22.5	22.7	22.6	23.0	22.9	23.0	23.2	23.8

[1] See definition in appendix.
[2] Detail may not add because of rounding. The real estate industry has been omitted.
[3] Finance and insurance, railroads and other transportation, communication, public utilities.

Source: "U.S. Income and Output," table VI–16.

The share of persons participating in production accounted for by the service sector is rather constant at about 26 percent prior to 1954. But beginning with the recession year, 1954, when the share accounted for by the service sector typically increases, an increase year by year in the importance of service employment is shown.

The service sector was 11.0 percent more important as a user of labor in 1958 than it was in 1947. The service industries alone were 15.6 percent more important while the utilities and communications industries gained smaller amounts, or, in the case of railways, declined in relative importance.

III. PRICES

The service component of the Consumer Price Index has shown a progressive slowing of the rate of increase during the postwar years, although the rate of advance still exceeded 3 percent per year in the period of least increase, 1955–58. This compares with an annual increase of about 2.2 percent for the total CPI during the same period. Table 11 presents the record on rates of increase in the Consumer Price Index for several subperiods 1947–58. After a rapid rise from wartime levels, commodity prices showed a slight decline between 1951 and 1955, but then increased again in the period following 1956. The service price index continued up without pause. There has not been a single quarter-to-quarter change in which the service price index did not rise.

TABLE 11.—*Service prices: Average annual rates of change, selected periods, 1947–58*

[Percentage rates]

	1947–58	1947–51	1951–55	1955–58	1955–59 [1]
Consumer Price Index:					
All services	3.8	4.8	3.3	3.1	4.3
Rent	3.5	4.6	3.6	1.9	3.1
Household operation	2.8	3.2	2.5	2.9	3.8
Transportation	6.3	9.7	4.5	4.2	5.4
Medical care	4.2	4.4	4.0	4.4	6.3
All other services	2.7	3.0	2.1	3.1	4.0
All commodities	1.7	3.5	−.3	2.2	1.3
All items	2.4	3.8	.8	2.2	2.3
Personal consumption implicit deflators:					
Total services	3.3	4.0	3.2	2.4	[2]
Other services [3]	3.6	4.1	3.3	3.2	[2]
Durable goods	1.6	3.4	−.2	1.7	[2]
Nondurable goods	1.6	2.8	.1	2.2	[2]
Total consumption	2.2	3.2	1.1	2.2	[2]

[1] September 1959.
[2] Not available.
[3] Services other than housing, household operation, and transportation.

Source: Bureau of Labor Statistics: "U.S. Income and Output," table VII–3. Rates are compound interest computed from annual base and terminal values.

Tabulated in table 12 is the quarterly Consumer Price Index for virtually every one of approximately 300 items included in the index. The table is reprinted from a Bureau of Labor Statistics multilith release.

Table 12. Consumer Price Index--United States city average: Indexes of selected items and groups, quarterly, 1947-58

(1947-49=100 unless otherwise specified)

Item and group	Other index bases	1947				1948				1949			
		Mar.	June	Sept.	Dec.	Mar.	June	Sept.	Dec.	Mar.	June	Sept.	Dec.
All items		93.7	94.2	98.3	100.2	100.2	103.1	104.8	103.0	101.9	102.0	102.1	101.0
All items less food		93.6	94.1	96.5	98.6	100.1	101.1	103.6	104.0	103.4	102.7	102.8	103.1
All items less shelter		93.9	94.4	98.5	100.5	100.3	103.5	105.2	103.0	101.6	101.6	101.6	100.0
Commodities		93.8	94.4	99.0	101.1	100.6	104.2	105.7	102.8	101.0	101.0	100.5	98.5
Nondurables		93.8	94.4	99.2	101.3	100.6	104.6	105.8	102.5	100.5	100.7	100.4	98.2
Nondurables less food		94.4	95.1	96.7	99.8	102.0	102.5	104.9	104.8	102.5	100.6	99.8	99.6
Nondurables less food and apparel		92.2	92.8	95.4	99.7	101.3	102.2	104.7	104.9	104.0	102.2	102.2	102.7
Durables		93.2	93.3	96.7	98.4	99.7	99.8	104.8	105.2	104.8	102.7	102.4	102.5
Durables less cars		95.6	95.6	98.1	100.5	102.2	102.2	104.3	104.9	102.6	99.4	98.3	98.4
Commodities less food		94.3	94.8	97.0	99.6	101.6	102.0	104.8	104.9	103.0	101.1	100.1	99.9
Services		93.1	93.4	95.8	97.3	98.5	99.7	102.0	103.2	104.2	104.8	105.7	106.8
Services less rent		94.0	94.4	95.2	96.5	97.8	99.2	102.3	103.6	104.5	104.8	105.8	106.7
Household operation services, gas, and electricity		95.9	96.2	97.2	98.0	99.2	99.5	100.2	101.8	102.7	103.4	104.2	105.1
Household utilities 1/		97.0	96.7	97.7	98.0	99.3	99.6	100.2	100.8	101.7	102.8	103.9	104.9
Transportation services		88.4	89.3	89.6	91.4	92.4	97.0	107.4	107.7	109.5	109.7	112.1	115.4
Medical care services		93.3	94.3	95.8	96.7	98.9	101.0	102.4	103.4	104.2	104.5	105.0	105.5
Other services		96.9	96.5	97.0	98.7	99.7	99.2	100.5	102.4	102.8	102.4	103.1	102.3
Food		93.8	94.3	100.7	102.4	100.1	106.0	106.5	101.5	99.8	101.1	101.1	97.7
Food at home		-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Cereals and bakery products		89.6	93.5	95.5	103.1	103.4	103.6	103.3	103.0	102.9	102.7	102.7	102.4
Meats, poultry, and fish		89.4	93.4	103.6	97.8	96.7	109.8	114.2	103.9	98.8	103.6	104.9	96.1
Dairy products		97.4	89.0	101.3	106.4	104.4	106.9	108.4	103.4	98.8	94.5	96.2	96.7
Fruits and vegetables		97.7	100.4	97.1	100.5	101.3	105.2	95.9	94.2	105.0	106.7	97.8	97.1
Other foods at home		97.6	95.1	104.3	109.5	97.9	100.0	106.0	103.0	93.0	94.9	102.3	99.3
Food away from home	Jan 53	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Housing 2/		93.0	93.3	96.8	99.2	100.5	101.2	102.9	103.7	103.6	102.7	103.2	104.2
Rent		92.3	92.6	96.5	98.3	99.3	100.2	101.8	103.0	103.9	104.8	105.7	107.0
Home maintenance and repairs	Dec 52	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Exterior house paint	Dec 52	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----

Porch flooring	Dec 52	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Water heaters	Dec 52	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Cabinet kitchen sinks	Dec 52	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Sink faucets	Dec 52	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Repainting rooms	Dec 52	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Repainting garage	Dec 52	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Refinishing floors	Dec 52	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Reshingling roof	Dec 52	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Other home-owner costs:													
First mortgage interest rates	Dec 52	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Property insurance rates	Dec 52	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Gas and electricity		97.8	97.2	97.7	98.2	99.5	99.9	100.3	101.1	101.9	102.8	103.0	103.1
Gas		96.5	95.8	96.4	97.1	99.3	99.9	99.9	101.0	103.3	104.0	104.7	104.8
Electricity		99.1	98.9	99.1	99.4	99.7	99.8	100.4	100.8	100.0	101.2	101.1	101.1
Solid fuels and fuel oil		84.4	84.0	93.3	97.4	99.9	102.8	108.7	108.9	109.6	104.2	105.8	109.0
Solid fuels		85.3	84.1	94.1	97.3	98.7	101.9	108.6	108.8	109.7	104.8	106.3	109.6
Petroleum fuels		79.5	84.8	88.0	99.7	109.9	109.2	110.6	110.2	108.5	100.4	102.5	105.1
Household operation		95.4	96.6	97.1	101.8	102.9	102.0	102.0	102.7	100.9	99.6	99.4	100.0
Laundry soaps and detergents		104.3	102.4	97.5	114.5	111.2	104.7	103.6	103.4	93.4	88.5	85.4	84.2
Laundry services		92.3	93.8	95.2	97.5	98.7	99.0	99.9	105.0	105.8	105.6	105.6	106.1
Dry cleaning and pressing		94.6	95.6	97.3	99.2	100.1	101.0	101.1	102.9	102.9	103.1	102.4	102.9
Domestic service		96.7	99.6	99.9	100.1	100.1	100.4	100.4	100.4	100.8	100.8	100.8	100.8
Telephone		94.0	94.1	97.1	97.1	99.4	99.7	101.2	101.9	101.9	102.1	105.9	110.9
Postage		97.4	97.4	97.4	97.4	97.4	97.4	97.4	97.4	105.9	105.9	105.9	105.9
Water	Dec 52	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Housefurnishings		96.1	96.3	98.8	100.9	102.7	102.7	104.4	104.7	102.2	98.7	97.8	97.7
Textiles	Dec 52	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Towels, bath		103.9	98.0	95.3	98.4	98.9	100.7	102.5	101.1	100.3	99.4	100.7	100.7
Sheets, muslin		100.0	99.2	99.2	103.2	105.8	106.2	106.0	106.0	102.2	91.0	88.4	89.8
Curtains		-----	-----	103.3	103.5	106.1	106.1	106.8	100.9	94.5	90.0	88.3	87.8
Blankets, wool		(4/)	(4/)	99.3	98.8	(4/)	(4/)	98.8	100.2	(4/)	(4/)	100.7	101.1
Bedspreads, cotton	Dec 52	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Drapery fabric, cotton	Dec 52	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Floor coverings:													
Rugs, wool Axminster		95.2	93.9	95.9	96.0	99.4	100.1	103.1	104.0	105.1	104.2	102.5	104.4
Carpets, wool broadloom		105.9	106.5	98.9	91.2	96.0	97.8	100.2	100.2	101.4	99.6	101.4	102.3
Carpets, rayon broadloom	Dec 52	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Rugs, felt base		93.3	98.1	99.5	101.4	102.4	101.9	102.4	102.4	102.4	101.9	99.1	98.2

See footnotes at end of table.

Table 12. Consumer Price Index--United States city average: Indexes of selected items and groups, quarterly, 1947-58 (Cont'd)

(1947-49=100 unless otherwise specified)

Item and group	Other index bases	1947				1948				1949			
		Mar.	June	Sept.	Dec.	Mar.	June	Sept.	Dec.	Mar.	June	Sept.	Dec.
Housing--Continued													
Housefurnishings--Continued													
Furniture and bedding		94.1	93.3	95.4	98.4	102.0	104.4	106.0	105.9	103.8	100.9	99.2	99.0
Furniture		93.5	92.8	95.2	98.4	102.2	105.1	106.9	106.6	104.1	100.6	98.8	98.6
Living room suites		99.5	96.4	98.0	100.0	102.3	102.2	103.5	103.9	102.1	99.1	96.6	96.3
Dinette sets		-----	-----	91.6	96.3	101.5	106.5	109.0	106.7	104.4	99.3	97.6	97.6
Bedroom suites		86.7	88.1	92.6	96.8	101.7	108.0	110.2	108.9	106.3	103.0	102.2	101.9
Bedding:													
Sofa beds		97.9	96.4	97.6	100.3	101.8	101.8	101.8	102.2	100.3	101.0	99.9	99.1
Mattresses		101.1	98.3	98.0	98.6	101.4	100.8	100.8	101.4	100.8	99.7	98.6	98.9
Appliances 3/		95.7	97.0	101.3	103.3	103.3	101.3	103.4	104.6	101.1	96.8	96.7	96.6
Sewing machines		88.5	89.1	92.6	98.5	99.7	102.1	105.0	106.1	106.1	106.1	106.1	106.7
Washing machines		91.1	95.0	99.4	101.7	102.1	100.9	104.3	105.5	102.9	101.2	99.1	101.0
Vacuum cleaners		101.5	102.9	103.6	100.0	98.9	97.8	98.2	99.6	100.0	99.6	98.9	98.5
Refrigerators		89.5	91.7	99.4	101.4	102.7	101.2	107.0	109.7	104.2	98.3	99.4	97.4
Ranges		96.1	97.3	98.5	101.5	102.6	102.7	103.6	104.9	101.8	99.0	98.4	95.5
Toasters	Dec 52	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Miscellaneous housefurnishings:													
Dinnerware		93.8	93.8	95.9	95.9	98.9	99.8	100.7	105.0	106.3	105.4	105.0	105.0
Aluminum pans	Dec 52	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Paper napkins	Dec 52	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Toilet tissue		89.6	94.6	96.9	103.0	107.2	107.2	106.[illegible]	105.5	102.6	99.8	99.5	94.9
Electric light bulbs	Dec 52	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Apparel		96.3	97.1	98.1	99.9	102.6	102.9	105.1	104.8	101.4	99.5	97.9	97.1
Men's and boys'		96.8	97.1	97.8	99.3	101.7	102.5	104.2	103.8	101.1	100.0	99.0	98.9
Women's and girls'		97.5	97.8	99.4	100.8	102.6	102.6	106.1	105.9	101.2	98.2	96.0	94.3
Footwear		93.5	94.8	95.0	98.3	103.3	103.1	103.9	103.9	103.1	102.7	101.6	101.4
Other apparel		93.8	100.0	102.2	104.9	109.6	109.5	109.0	105.9	97.1	92.0	89.3	89.3
Wool apparel		91.9	92.9	96.6	97.0	98.8	100.3	106.8	106.4	(4/)	(4/)	103.5	102.4
Men's:													
Topcoats		95.7	(4/)	97.0	99.3	99.8	(4/)	102.7	102.9	101.4	(4/)	101.1	102.3
Suits, year-round		88.7	90.5	92.4	95.7	103.8	104.8	106.9	106.4	105.9	105.0	102.8	102.7
Suits, summer		(4/)	91.7	(4/)	(4/)	(4/)	104.3	(4/)	(4/)	(4/)	105.3	(4/)	(4/)
Trousers		100.0	100.0	92.0	92.7	99.0	101.0	103.6	104.0	105.0	103.6	100.3	100.3

Trousers													
Sweaters		(1/)	(1/)	100.7	100.2	(1/)	(1/)	101.7	101.2	(1/)	(1/)	96.6	95.1
Women's:													
Coats, heavy, plain		(1/)	(1/)	94.8	92.1	(1/)	(1/)	108.4	110.7	(1/)	(1/)	105.0	100.1
Coats, light, plain		95.6	(1/)	(1/)	(1/)	105.9	(1/)	(1/)	(1/)	100.7	(1/)	(1/)	(1/)
Suits		-----	-----	94.4	91.5	98.0	(1/)	104.5	103.6	105.4	(1/)	100.9	99.8
Dresses		(1/)	(1/)	96.7	100.1	(1/)	(1/)	105.9	103.0	(1/)	(1/)	101.1	100.1
Children's:													
Boys' suits		-----	-----	92.8	95.2	99.7	(1/)	104.1	102.4	103.0	(1/)	101.4	100.8
Girls' coats		-----	-----	99.5	97.7	(1/)	(1/)	103.9	101.6	(1/)	(1/)	101.1	96.4
Girls' skirts	Dec 52	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Cotton apparel		100.8	102.1	101.8	102.8	104.9	104.0	103.6	102.1	97.1	94.1	92.9	92.7
Men's:													
Shirts, business		102.5	103.0	102.9	103.7	106.6	104.0	102.4	99.7	93.9	93.1	91.9	92.0
Shirts, sport	Jun 55	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Pajamas		109.0	112.3	111.1	111.5	111.5	104.4	98.2	93.7	87.0	85.0	85.0	85.8
Shorts, woven		102.7	101.7	102.3	104.3	108.3	107.7	102.8	100.8	94.5	91.4	89.9	89.3
Undershirts		103.2	101.0	101.5	101.0	104.3	105.3	101.5	99.9	95.5	94.4	94.4	94.4
Socks		102.7	105.7	103.2	102.0	100.8	100.2	100.8	99.6	95.6	95.6	96.6	97.2
Trousers, work		99.5	99.5	100.1	101.2	101.2	101.7	102.2	102.2	98.9	97.8	97.8	96.8
Dungarees		113.6	103.9	101.6	100.8	101.4	100.5	99.6	99.4	97.1	91.3	92.2	91.6
Shirts, work		105.0	100.7	100.0	101.1	103.4	102.2	103.0	101.5	97.8	94.7	93.3	94.4
Gloves, work	Dec 52	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Women's:													
Dresses, street		85.4	96.6	(1/)	(1/)	103.2	107.0	(1/)	(1/)	108.8	97.4	(1/)	(1/)
Dresses, house		104.8	106.2	103.4	102.9	104.3	102.7	100.6	100.0	96.0	92.6	92.0	91.2
Blouses	Mar 56	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Children's:													
Girls' dresses		-----	-----	97.8	105.2	103.2	103.7	105.6	104.5	95.4	92.7	92.3	92.7
Girls' panties		-----	-----	95.5	99.1	102.7	103.9	103.9	105.1	101.4	97.9	97.9	97.9
Girls' anklets		-----	-----	96.7	97.4	98.1	100.9	102.9	102.9	103.6	102.2	101.5	100.9
Boys' shirts		-----	-----	96.9	104.6	100.7	90.9	109.9	109.1	92.3	87.7	100.7	98.4
Boys' shorts		-----	-----	101.9	105.1	100.7	101.3	101.9	102.5	98.2	93.7	91.8	91.1
Boys' jeans	Dec 52	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Other cotton apparel:													
Diapers		-----	-----	106.4	106.4	102.4	98.5	98.5	98.5	98.5	90.6	90.6	90.6
Yard goods, percale		96.9	101.4	105.7	109.4	116.7	113.1	108.8	100.5	88.9	86.7	84.6	84.9

See footnotes at end of table.

Table 12. Consumer Price Index--United States city average: Indexes of selected items and groups, quarterly, 1947-58 (Cont'd)

(1947-49=100 unless otherwise specified)

Item and group	Other index bases	1947				1948				1949			
		Mar.	June	Sept.	Dec.	Mar.	June	Sept.	Dec.	Mar.	June	Sept.	Dec.
Apparel--Continued													
Manmade fibers apparel		101.5	99.8	99.6	102.5	106.1	106.1	106.9	107.0	99.4	93.9	88.2	86.7
Men's:													
Suits, rayon	Jun 53	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Slacks, rayon	Dec 52	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Jackets	Dec 52	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Sport shirts, rayon	Dec 52	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Socks, nylon, stretch	Jun 56	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Women's:													
Dresses, rayon		98.3	100.2	100.4	103.9	107.2	107.4	108.4	109.6	101.2	92.2	85.6	82.7
Slips, rayon and nylon		88.2	89.4	92.1	101.2	110.7	110.7	110.8	110.5	105.9	103.2	91.2	88.7
Panties, rayon		99.4	99.0	100.5	100.5	103.4	104.4	106.4	105.4	102.0	97.5	90.7	90.7
Nightgowns, rayon		(1/)	(1/)	103.1	104.3	(1/)	(1/)	106.3	106.9	(1/)	(1/)	87.2	84.6
Hose, nylon		110.8	102.8	100.4	100.7	102.2	102.0	103.7	103.4	96.5	93.9	90.0	89.5
Suits, rayon	Dec 52	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Skirts, rayon	Dec 52	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Blouses	Dec 52	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Children's:													
Boys' slacks	Dec 52	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Boys' jackets	Dec 52	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Girls' sweaters, orlon	Dec 52	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Other manmade fibers apparel:													
Yard goods, rayon		93.0	100.3	105.3	108.7	117.5	119.1	117.0	114.1	93.2	78.2	76.5	76.5
Miscellaneous apparel	Dec 52	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Women's coats, fur		(1/)	(1/)	98.5	98.2	(1/)	(1/)	107.1	103.4	(1/)	(1/)	94.4	90.7
Women's girdles		101.2	102.4	99.7	96.6	93.8	94.8	102.4	101.7	101.7	102.4	102.4	102.7
Shoes		93.6	95.1	94.2	98.6	103.9	103.4	104.0	104.0	103.2	102.7	101.0	100.9
Men's:													
Shoes, street		93.3	94.2	94.2	99.2	102.6	102.6	103.9	104.1	103.3	103.4	101.8	102.4
Shoes, work		94.4	93.0	96.8	99.2	104.6	104.0	104.3	103.8	102.7	101.1	99.7	98.7
Women's:													
Shoes, street		93.7	96.5	92.7	97.4	104.9	103.8	104.5	104.4	103.7	102.3	100.2	100.2
Shoes, play	Dec 52	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Children's:													
Shoes, oxford		93.4	94.6	97.3	100.4	103.4	103.4	103.0	102.9	102.1	101.7	101.1	100.5
Shoe repairs		96.5	97.0	97.2	98.2	100.4	101.1	101.5	101.9	101.9	102.1	102.1	101.5

Transportation		88.8	89.8	92.0	94.1	96.1	97.7	105.3	106.0	107.5	108.0	109.4	110.3
Private		89.2	90.2	93.3	95.6	97.7	98.5	104.7	105.3	106.8	107.5	108.0	107.8
Automobiles, new		88.8	89.1	94.1	94.8	95.3	95.4	105.9	105.8	108.8	109.1	110.0	109.9
Automobiles, used	Jan 53	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Tires		104.6	96.3	94.7	97.9	99.0	99.0	103.2	103.5	103.5	99.7	95.8	101.1
Gasoline		87.2	90.2	93.5	98.2	103.4	103.3	103.5	104.1	105.1	106.3	106.3	105.9
Motor oil		90.4	91.4	92.5	93.6	101.7	103.8	104.9	105.4	105.4	105.2	105.7	105.7
Auto repairs		94.8	95.2	95.8	97.5	98.5	100.7	103.2	103.7	103.4	103.4	103.7	103.7
Auto registration		97.9	97.9	97.9	97.9	100.4	101.4	101.4	101.4	101.4	101.4	101.4	101.4
Auto insurance		84.0	85.0	86.0	86.0	86.0	101.5	112.4	112.8	112.8	114.6	114.6	114.6
Public		87.9	88.9	89.0	90.3	92.3	95.8	106.7	107.8	109.1	109.2	112.8	116.4
Transit fares		88.2	88.9	89.1	91.3	92.3	95.8	107.3	107.7	109.9	109.9	113.1	117.1
Railroad fares, coach		85.1	92.0	92.0	92.0	96.0	96.0	108.1	108.1	108.1	108.1	108.1	117.0
Medical care		93.6	94.7	96.0	97.2	98.8	100.5	102.0	102.9	103.8	104.0	104.5	104.9
Medical care less hospital rates and group hospitalization		95.2	96.0	97.4	98.1	99.1	100.7	101.9	102.5	102.8	103.2	103.3	103.7
Physicians' fees		96.1	96.6	97.6	98.1	99.0	101.3	101.8	102.2	102.4	102.5	102.5	103.0
General practitioners' fees		96.4	96.7	97.7	98.0	98.8	101.3	101.6	102.2	102.3	102.4	102.5	102.9
Office visit		96.5	97.0	97.2	97.4	98.2	101.9	102.1	102.7	102.3	101.9	102.4	102.8
House visit		97.2	97.2	98.5	98.6	99.5	100.1	100.6	101.1	102.3	102.7	102.2	102.5
Obstetrical care		93.6	94.5	96.7	98.1	99.2	102.8	103.0	103.3	102.8	103.0	103.3	103.3
Surgeons' fees		94.7	96.0	97.5	98.5	99.3	101.0	102.5	102.5	102.5	102.8	103.0	103.8
Appendectomy		95.5	97.6	98.4	99.2	99.5	100.8	102.3	102.3	101.1	101.1	101.9	103.5
Tonsillectomy		93.9	94.3	96.7	97.8	99.0	101.4	102.5	102.5	103.7	104.5	104.1	104.1
Dentists' fees		93.9	94.9	96.7	97.4	98.2	99.5	102.2	103.3	103.6	104.5	104.7	105.5
Fillings		93.8	95.2	96.8	97.0	98.0	99.6	102.4	103.8	104.1	104.3	104.3	105.3
Extractions		93.3	94.1	96.8	98.6	98.8	99.7	102.1	102.4	102.4	105.3	105.9	106.1
Optometric examination and eyeglasses		95.3	95.6	97.0	98.1	99.4	99.9	101.0	101.8	103.4	103.4	104.0	104.0
Hospital rates		84.5	87.6	89.9	92.1	99.1	102.6	104.3	106.8	109.3	110.2	111.3	112.1
Man's pay ward		83.4	86.8	88.2	90.0	99.4	103.0	105.2	107.2	111.5	111.5	113.0	114.0
Semiprivate room		83.7	87.7	90.3	92.7	98.7	102.0	105.0	107.0	110.0	110.7	111.7	112.0
Private room		85.9	88.5	91.5	94.1	99.2	102.5	104.5	106.3	108.2	108.8	109.6	110.4

See footnotes at end of table.

Table 12. Consumer Price Index--United States city average: Indexes of selected items and groups, quarterly, 1947-58 (Cont'd)

(1947-49=100 unless otherwise specified)

Item and group	Other index bases	1947				1948				1949			
		Mar.	June	Sept.	Dec.	Mar.	June	Sept.	Dec.	Mar.	June	Sept.	Dec.
Medical Care--Continued													
Group hospitalization	Dec 52	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Prescriptions and drugs		94.6	95.8	97.5	98.9	100.6	101.2	101.7	102.2	102.3	102.6	102.8	103.1
Prescriptions		91.6	93.1	96.2	98.4	101.0	101.7	102.5	103.6	103.6	104.0	104.6	105.1
Aspirin tablets		98.5	99.4	100.3	100.3	100.3	100.3	100.3	100.3	100.3	100.3	100.3	100.3
Milk of magnesia		100.1	100.1	100.1	99.8	100.1	100.1	100.1	99.8	100.1	100.1	100.5	100.5
Multiple vitamin concentrate	Dec 52	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Personal care		97.3	97.1	97.2	100.0	100.3	100.3	102.1	102.7	101.9	101.2	100.8	100.1
Men's haircuts		93.4	93.4	94.5	97.0	99.1	99.1	102.9	105.5	105.1	104.7	104.7	104.7
Beauty shop services		100.3	100.3	100.9	100.7	101.3	99.9	99.8	99.7	99.6	99.6	99.5	98.7
Shampoo and wave set		99.5	99.6	100.7	99.2	99.8	100.2	100.2	100.3	100.3	100.3	100.4	99.5
Permanent wave		101.3	101.1	101.1	102.5	103.2	99.5	99.3	98.8	98.6	98.6	98.2	97.6
Toilet goods		99.3	98.6	97.2	103.6	102.5	101.3	102.2	102.2	100.0	98.8	97.8	96.2
Toothpaste		95.5	95.7	96.6	97.3	97.5	97.3	103.9	104.0	104.3	104.4	105.1	103.2
Face powder		93.8	95.4	98.7	100.0	100.0	100.2	100.2	100.2	100.0	103.5	105.5	106.3
Toilet soap		111.2	102.1	96.4	110.5	107.5	103.9	100.9	100.5	95.2	90.9	87.3	84.6
Razor blades		99.8	99.8	99.8	99.8	99.8	99.8	99.8	100.4	100.4	100.4	100.4	100.4
Sanitary napkins		82.5	91.6	94.5	96.8	98.6	103.8	106.8	106.8	106.8	106.8	106.8	106.8
Cleansing tissue	Dec 52	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Shaving cream	Dec 52	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Face cream	Dec 52	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Shampoo	Dec 52	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Home permanent refill	Dec 52	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Reading and recreation		95.4	95.2	95.6	97.4	97.7	100.2	100.8	103.0	104.1	103.9	104.8	104.3
Motion-picture admissions		98.7	97.6	(4/)	99.6	99.5	98.7	98.9	101.4	102.5	101.3	102.6	102.0
Adults		98.3	97.4	97.4	99.4	99.5	98.8	99.2	101.5	102.5	102.0	103.4	102.2
Children		101.4	98.9	(4/)	100.4	99.8	99.4	98.1	101.6	103.9	97.4	97.9	102.1
Newspapers		91.4	92.4	92.6	93.9	95.7	102.7	103.7	106.1	107.0	107.0	107.0	107.0
Television sets	Dec 52	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Radios, table	Dec 52	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	90.7	89.7
Toys	Dec 52	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Sporting goods	Dec 52	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Television repairs	Dec 52	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----

Other goods and services		95.0	95.7	96.9	97.9	98.4	98.4	102.8	103.2	103.0	103.2	104.0	104.0
Tobacco products		94.8	95.4	97.2	97.9	98.6	98.6	103.4	103.4	103.0	103.4	103.8	103.8
Cigars		97.4	97.0	97.0	97.4	97.1	97.0	103.0	103.6	102.9	103.1	103.6	103.6
Cigarettes		93.9	94.9	97.3	97.8	98.7	98.8	103.8	103.7	103.3	103.5	103.7	103.6
Alcoholic beverages	Dec 52	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Beer	Dec 52	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Whisky	Dec 52	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----

See footnotes at end of table.

Table 12. Consumer Price Index--United States city average: Indexes of selected items and groups, quarterly, 1947-58 (Cont'd)

(1947-49=100 unless otherwise specified)

Item and group	Other index bases	1950				1951				1952			
		Mar.	June	Sept.	Dec.	Mar.	June	Sept.	Dec.	Mar.	June	Sept.	Dec.
All items		100.7	101.8	104.4	106.9	110.3	110.8	111.6	113.1	112.4	113.4	114.1	114.1
All items less food		103.1	103.0	105.2	107.4	110.1	110.5	111.7	112.7	112.9	113.3	114.0	114.8
All items less shelter		99.7	100.7	103.5	106.2	109.9	110.3	111.0	112.5	111.6	112.6	113.4	113.0
Commodities		97.9	100.3	102.8	106.0	109.9	110.3	110.9	112.4	111.0	111.7	112.3	111.6
Nondurables		97.6	100.2	102.5	105.8	109.9	110.3	111.0	112.4	110.8	111.7	112.5	111.5
Nondurables less food		99.3	99.0	102.0	104.9	108.1	108.3	109.6	109.8	109.1	108.5	109.3	109.1
Nondurables less food and apparel		102.4	101.6	104.8	107.8	110.1	110.2	109.9	111.5	111.7	111.7	112.9	113.3
Durables		102.4	102.4	106.1	108.8	112.4	112.5	112.5	113.9	114.4	113.3	113.5	113.8
Durables less cars		98.3	98.3	104.0	108.1	112.1	112.0	110.5	110.5	109.3	107.7	107.6	107.7
Commodities less food		99.5	99.4	102.6	105.5	108.5	108.8	109.8	110.4	110.0	109.3	109.7	109.8
Services		107.4	107.9	109.2	110.8	113.1	113.7	115.0	116.5	117.6	119.3	120.3	121.9
Services less rent		107.0	107.0	108.9	111.0	113.8	114.2	115.5	117.0	118.1	120.3	121.5	122.5
Household operation services, gas, and electricity		105.1	105.2	106.2	107.8	108.6	108.9	109.7	111.8	112.4	113.2	114.0	115.3
Household utilities 1/		104.8	104.9	105.5	105.6	105.8	105.8	106.9	107.8	108.7	109.2	109.8	110.5
Transportation services		115.5	115.7	120.8	123.1	127.9	128.3	131.8	132.6	134.3	138.2	141.5	143.2
Medical care services		106.2	106.5	107.4	109.0	111.3	112.2	112.9	115.4	117.3	120.0	121.2	121.7
Other services		102.7	102.4	103.3	106.3	109.2	109.2	109.3	109.9	110.4	111.9	111.6	112.0
Food		97.3	100.5	104.0	107.1	112.0	112.3	112.5	115.0	112.7	114.6	115.4	113.8
Food at home		-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Cereals and bakery products		102.3	102.7	107.0	107.5	113.4	114.0	114.6	115.2	115.7	116.9	117.4	117.7
Meats, poultry, and fish		98.7	106.1	112.4	109.1	117.2	116.9	118.6	116.3	115.2	116.5	119.2	113.0
Dairy products		94.7	92.3	97.0	100.7	106.2	105.9	107.2	110.7	112.0	108.9	112.5	112.7
Fruits and vegetables		95.5	102.5	91.1	99.9	106.3	107.7	100.4	115.8	113.7	122.4	111.5	115.8
Other foods at home		95.5	94.1	107.7	117.0	112.7	113.8	118.4	114.5	104.4	105.2	113.7	110.6
Food away from home	Jan 53	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Housing 2/		104.6	104.9	107.1	109.4	111.7	112.3	112.9	113.9	114.0	114.0	114.8	116.4
Rent		107.8	108.7	109.5	110.4	111.9	112.7	114.2	115.6	116.7	117.6	118.3	120.7
Home maintenance and repairs	Dec 52	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	100.0
Exterior house paint	Dec 52	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	100.0

Exterior house paint	Dec 52	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	100.0
Porch flooring	Dec 52	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	100.0
Water heaters	Dec 52	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	100.0
Cabinet kitchen sinks	Dec 52	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	100.0
Sink faucets	Dec 52	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	100.0
Repainting rooms	Dec 52	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	100.0
Repainting garage	Dec 52	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	100.0
Refinishing floors	Dec 52	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	100.0
Reshingling roof	Dec 52	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	100.0
Other home-owner costs:													
First mortgage interest rates	Dec 52	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	100.0
Property insurance rates	Dec 52	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	100.0
Gas and electricity		102.8	102.7	102.8	102.7	103.1	103.0	103.2	103.4	103.8	104.3	105.0	105.6
Gas		104.7	104.5	104.1	103.6	103.9	103.4	103.8	104.4	105.1	106.2	106.2	106.8
Electricity		101.1	101.2	101.2	101.2	101.7	102.0	102.4	102.2	102.5	102.5	103.6	104.3
Solid fuels and fuel oil		109.9	107.6	111.6	114.8	116.7	115.4	116.6	117.6	117.7	115.8	119.6	123.2
Solid fuels		111.8	108.6	112.6	115.2	118.0	115.7	117.6	118.9	119.0	116.0	119.0	125.1
Petroleum fuels		103.6	102.9	107.1	110.9	111.4	111.6	111.7	112.1	112.2	112.1	116.7	116.8
Household operation		99.5	99.6	102.3	105.6	108.4	108.7	108.8	111.1	111.0	111.2	112.1	113.4
Laundry soaps and detergents		81.5	80.9	85.7	92.3	99.7	98.6	94.4	93.7	91.8	88.5	88.8	88.8
Laundry services		106.3	106.4	108.8	115.2	116.6	116.5	116.2	116.7	116.9	118.5	120.3	121.6
Dry cleaning and pressing		102.7	102.4	106.5	108.2	110.3	112.2	112.2	112.1	112.1	113.0	112.9	113.8
Domestic service		100.8	100.8	101.1	101.1	102.9	104.7	105.1	111.5	111.6	112.4	112.7	116.2
Telephone		111.1	111.8	113.6	114.9	114.6	114.8	114.8	116.1	118.9	118.9	119.5	120.6
Postage		105.9	105.9	105.9	105.9	105.9	105.9	105.9	119.1	119.1	119.1	119.1	119.1
Water	Dec 52	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	100.0
Housefurnishings		97.7	97.4	102.4	107.1	111.1	112.0	111.3	110.8	109.4	107.7	108.1	108.2
Textiles	Dec 52	-----	-----	-----	101.4	105.9	108.0	107.7	104.8	100.8	99.2	99.1	100.0
Towels, bath		100.3	100.3	107.5	116.5	121.3	122.0	120.6	117.9	117.2	115.8	117.2	116.5
Sheets, muslin		90.2	88.8	102.8	116.1	120.9	120.3	112.8	111.4	104.7	99.1	99.6	101.7
Curtains		88.7	88.5	95.7	104.0	108.8	112.6	110.3	108.3	104.4	103.7	104.4	105.4
Blankets, wool		(4/)	(4/)	108.1	113.1	(4/)	(4/)	145.6	131.2	(4/)	(4/)	122.7	123.1
Bedspreads, cotton	Dec 52	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	100.0
Drapery fabric, cotton	Dec 52	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	100.0
Floor coverings:													
Rugs, wool Axminster		109.4	114.8	131.1	142.9	157.9	162.0	151.9	148.3	142.8	137.5	138.3	141.2
Carpets, wool broadloom		103.8	106.2	119.2	131.8	142.5	146.0	126.7	122.0	120.4	113.8	114.4	115.1
Carpets, rayon broadloom	Dec 52	-----	-----	-----	96.5	103.4	105.1	106.0	101.7	102.6	100.0	98.3	100.0
Rugs, felt base		98.2	97.6	97.6	98.2	102.1	101.1	101.4	103.4	105.4	105.4	106.0	106.0

See footnotes at end of table.

Table 12. Consumer Price Index--United States city average: Indexes of selected items and groups, quarterly, 1947-58 (Cont'd)

(1947-49=100 unless otherwise specified)

Item and group	Other index bases	1950				1951				1952			
		Mar.	June	Sept.	Dec.	Mar.	June	Sept.	Dec.	Mar.	June	Sept.	Dec.
Housing--Continued													
Housefurnishings--Continued													
Furniture and bedding		98.9	98.9	105.0	108.9	112.6	113.4	113.1	112.9	111.8	110.1	110.1	109.6
Furniture		98.5	98.2	104.7	108.3	111.4	112.1	111.5	111.3	110.0	108.0	108.3	107.8
Living room suites		97.0	97.5	102.9	106.1	109.6	111.1	109.0	109.9	109.7	106.8	107.9	106.9
Dinette sets		96.0	93.2	100.9	105.4	105.4	106.2	106.1	106.3	104.1	103.4	102.9	102.8
Bedroom suites		101.4	101.3	108.6	112.7	117.1	116.6	117.7	115.5	113.6	111.7	111.7	111.6
Bedding:													
Sofa beds		98.8	101.0	102.6	104.9	110.6	111.2	112.2	111.2	110.6	108.0	108.5	111.2
Mattresses		99.1	98.9	107.8	115.3	119.7	121.0	120.3	121.0	120.3	119.3	117.3	115.9
Appliances 3/		95.4	94.5	97.7	100.5	104.0	103.2	101.2	101.2	99.8	98.1	97.9	97.9
Sewing machines		106.1	105.5	107.9	110.8	111.6	112.0	112.0	112.0	111.6	112.0	112.5	114.0
Washing machines		99.0	97.3	102.0	103.6	106.7	107.4	107.8	107.6	107.8	107.7	107.4	107.0
Vacuum cleaners		97.8	97.4	98.9	101.5	105.6	106.1	105.5	105.5	107.3	108.2	108.1	108.2
Refrigerators		98.6	97.1	98.9	101.9	104.1	104.1	104.6	105.0	102.2	98.1	99.6	99.0
Ranges		93.9	93.5	98.7	101.2	108.4	109.0	106.6	107.5	107.1	106.9	105.0	105.4
Toasters	Dec 52	-----	-----	-----	108.6	110.0	105.8	103.1	102.5	102.3	100.5	100.2	100.0
Miscellaneous housefurnishings:													
Dinnerware		105.8	105.4	105.4	108.0	111.7	111.9	114.5	115.6	116.5	116.0	117.0	117.6
Aluminum pans	Dec 52	-----	-----	-----	95.8	98.3	98.8	98.8	99.1	100.4	100.2	100.0	100.0
Paper napkins	Dec 52	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	100.0
Toilet tissue		94.0	93.8	96.2	100.3	108.1	107.6	105.6	105.1	104.9	103.2	103.9	103.2
Electric light bulbs	Dec 52	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	100.0
Apparel		96.8	96.5	99.2	102.2	106.2	106.6	109.3	108.1	106.4	105.6	105.8	105.1
Men's and boys'		98.4	98.1	100.4	102.8	105.9	107.2	110.3	110.4	108.7	108.3	107.8	107.4
Women's and girls'		93.7	93.3	96.2	98.5	102.1	101.7	104.7	103.0	101.4	100.5	101.6	100.4
Footwear		101.5	102.1	105.2	110.3	116.8	117.8	119.6	117.9	116.4	115.4	114.2	114.4
Other apparel		89.5	88.4	94.4	99.1	103.8	103.7	100.4	96.2	92.8	91.3	91.5	92.5
Wool apparel		(4/)	(4/)	104.9	105.7	(4/)	(4/)	120.7	119.6	(4/)	(4/)	116.6	114.3
Men's:													
Topcoats		100.1	(4/)	103.1	105.2	107.6	(4/)	118.1	118.1	116.7	(4/)	113.4	112.6
Suits, year-round		102.0	103.0	103.8	106.6	112.8	114.6	120.5	121.3	116.4	115.4	113.7	113.3
Suits, summer		(4/)	102.9	(4/)	(4/)	(4/)	115.3	(4/)	(4/)	(4/)	112.8	(4/)	(4/)

Trousers		100.0	99.4	100.3	101.4	105.2	106.4	108.9	109.1	106.7	104.5	103.5	103.4
Sweaters		(4/)	(4/)	101.2	108.4	(4/)	(4/)	129.3	130.4	(4/)	(4/)	124.9	124.9
Women's:													
Coats, heavy, plain		(4/)	(4/)	107.9	107.3	(4/)	(4/)	131.9	128.2	(4/)	(4/)	126.3	121.5
Coats, light, plain		89.8	(4/)	(4/)	(4/)	114.4	(4/)	(4/)	(4/)	106.4	(4/)	(4/)	(4/)
Suits		100.8	(4/)	102.7	104.5	112.7	(4/)	112.0	108.5	113.8	(4/)	109.7	104.0
Dresses		(4/)	(4/)	103.0	103.0	(4/)	(4/)	111.1	102.8	(4/)	(4/)	107.2	103.3
Children's:													
Boys' suits		100.6	(4/)	103.8	106.5	110.8	(4/)	116.5	115.9	116.5	(4/)	116.5	116.5
Girls' coats		(4/)	(4/)	102.6	100.0	(4/)	(4/)	113.6	110.1	(4/)	(4/)	110.5	109.2
Girls' skirts	Dec 52	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	100.0
Cotton apparel		92.8	92.9	95.1	98.2	102.2	102.9	102.9	101.7	100.5	99.4	99.4	99.2
Men's:													
Shirts, business		91.7	90.9	91.6	94.3	99.7	99.8	99.3	99.3	97.6	96.5	95.8	95.8
Shirts, sport	Jun 55	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Pajamas		87.4	87.0	90.7	96.1	99.7	101.5	99.7	94.8	92.6	91.7	91.2	91.2
Shorts, woven		89.3	89.3	93.9	96.2	102.2	104.1	104.1	103.5	100.0	98.1	98.4	98.1
Undershirts		95.0	95.5	98.3	108.6	112.0	112.6	112.0	110.3	104.1	100.6	100.1	100.1
Socks		96.2	96.6	98.7	100.2	105.8	107.1	107.7	107.7	107.4	106.2	104.0	103.7
Trousers, work		97.3	96.8	101.7	103.3	107.9	109.5	110.0	107.4	107.4	106.4	105.9	105.9
Dungarees		91.9	91.9	98.5	106.5	112.2	112.6	113.7	112.2	112.2	112.2	111.9	111.9
Shirts, work		95.1	95.5	96.6	100.0	102.5	104.7	105.3	102.8	100.9	99.7	98.1	97.1
Gloves, work	Dec 52	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	100.0
Women's:													
Dresses, street		93.4	94.6	(4/)	(4/)	98.9	98.6	(4/)	(4/)	97.1	98.4	(4/)	(4/)
Dresses, house		92.0	93.4	92.9	95.3	98.6	98.0	95.9	94.7	94.2	94.2	94.2	94.4
Blouses	Mar 56	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Children's:													
Girls' dresses		92.7	94.8	94.6	94.6	98.7	99.5	106.5	105.6	104.5	103.8	104.2	101.7
Girls' panties		96.7	94.4	95.5	100.3	103.1	102.1	102.1	103.1	103.1	102.1	103.1	104.0
Girls' anklets		100.9	99.5	100.9	105.7	110.1	109.5	110.6	109.5	107.8	107.8	107.8	107.4
Boys' shirts		90.0	83.1	98.4	99.1	90.8	88.2	101.8	101.0	91.7	86.0	100.9	99.1
Boys' shorts		91.1	90.5	95.6	96.2	101.1	103.6	103.6	103.6	101.9	101.1	101.1	101.1
Boys' jeans	Dec 52	-----	-----	-----	95.9	99.7	100.8	100.3	100.0	98.6	100.8	100.5	100.0
Other cotton apparel:													
Diapers		90.6	86.7	94.6	98.5	102.2	102.2	101.4	97.4	96.8	93.7	94.4	96.5
Yard goods, percale		86.7	86.1	94.1	100.2	106.0	106.0	98.0	95.3	91.3	90.5	91.3	92.3

See footnotes at end of table.

Table 12. Consumer Price Index--United States city average: Indexes of selected items and groups, quarterly, 1947-58 (Cont'd)

(1947-49=100 unless otherwise specified)

Item and group	Other index bases	1950				1951				1952			
		Mar.	June	Sept.	Dec.	Mar.	June	Sept.	Dec.	Mar.	June	Sept.	Dec.
Apparel--Continued													
Manmade fibers apparel		87.1	87.3	87.9	91.2	93.7	92.9	91.1	98.5	88.6	87.9	87.5	87.7
Men's:													
Suits, rayon	Jun 53	-----	100.8	(1/)	(1/)	(1/)	106.7	(1/)	(1/)	(1/)	101.7	(1/)	(1/)
Slacks, rayon	Dec 52	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	100.0
Jackets	Dec 52	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	100.0
Sport shirts, rayon	Dec 52	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	100.0
Socks, nylon, stretch	Jun 56	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Women's:													
Dresses, rayon		(1/)	84.3	82.8	86.4	90.9	88.6	92.6	89.5	(1/)	(1/)	89.6	90.7
Slips, rayon and nylon		87.5	87.1	89.3	92.4	95.8	96.4	93.5	92.4	89.7	89.5	85.7	84.7
Panties, rayon		90.7	90.7	95.1	98.0	100.4	100.4	100.7	100.7	100.3	99.7	99.7	100.3
Nightgowns, rayon		(1/)	(1/)	83.4	85.9	(1/)	(1/)	87.2	86.8	(1/)	(1/)	86.8	88.0
Hose, nylon		90.6	90.0	90.8	94.5	95.3	94.4	86.1	84.7	83.4	83.5	81.1	81.1
Suits, rayon	Dec 52	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	100.0
Skirts, rayon	Dec 52	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	100.0
Blouses	Dec 52	-----	-----	-----	102.0	103.0	102.7	103.6	104.3	103.4	102.0	101.1	100.0
Children's:													
Boys' slacks	Dec 52	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	100.0
Boys' jackets	Dec 52	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	100.0
Girls' sweaters, orlon	Dec 52	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	100.0
Other manmade fibers apparel:													
Yard goods, rayon		77.3	77.8	78.6	79.0	81.8	81.8	78.2	75.2	71.6	71.1	70.5	70.5
Miscellaneous apparel	Dec 52	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	100.0
Women's coats, fur		(1/)	(1/)	93.5	91.9	(1/)	(1/)	101.4	98.8	(1/)	(1/)	95.1	93.6
Women's girdles		105.0	107.2	109.8	116.5	123.6	123.3	126.1	126.7	126.7	125.9	127.8	128.0
Shoes		100.8	101.2	105.2	110.3	116.4	117.4	118.9	117.2	115.5	114.2	112.6	113.2
Men's:													
Shoes, street		102.5	102.6	107.2	112.5	119.0	120.4	123.0	122.0	119.2	118.2	116.8	117.3
Shoes, work		98.7	98.1	103.8	108.4	115.7	117.2	119.8	119.8	117.8	113.9	112.8	112.8
Women's:													
Shoes, street		99.5	100.2	103.7	108.5	114.0	114.6	115.8	112.5	110.6	109.3	108.1	109.3
Shoes, play	Dec 52	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	100.0
Children's:													
Shoes, oxford		100.9	101.4	105.1	110.3	116.8	117.9	118.3	118.3	118.0	117.4	114.8	114.6

Shoe repairs		101.5	101.5	102.4	105.3	112.4	113.4	113.9	113.8	113.8	113.8	113.8	113.8
Transportation		109.8	109.9	112.7	114.1	116.9	117.5	119.7	122.2	124.4	126.3	127.7	128.9
Private		106.9	106.6	108.3	109.1	110.8	111.3	113.4	116.7	118.8	119.4	121.2	121.9
Automobiles, new		109.9	110.0	110.0	110.2	113.1	113.4	116.6	121.1	125.0	125.0	125.7	126.5
Automobiles, used	Jan 53	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	99.5
Tires		102.4	105.6	120.9	129.6	130.6	130.4	130.6	130.9	130.9	130.8	129.3	130.0
Gasoline		103.5	103.9	106.0	107.4	108.4	107.9	107.1	109.8	110.7	111.6	111.9	110.5
Motor oil		105.4	105.4	105.7	106.0	106.9	106.5	106.9	107.6	107.1	107.6	107.6	106.9
Auto repairs		103.4	102.7	109.4	108.9	113.4	113.8	114.7	114.6	114.9	116.9	116.9	117.5
Auto registration		102.3	102.3	102.3	102.0	102.1	102.1	102.1	102.1	105.9	105.9	105.9	106.4
Auto insurance		114.6	104.1	102.4	102.4	102.4	104.8	118.4	121.6	121.6	121.6	144.7	146.9
Public		116.8	117.9	123.3	126.2	131.6	132.5	135.1	135.7	138.1	143.0	143.5	145.8
Transit fares		117.2	119.1	125.5	128.7	135.9	136.0	138.8	139.4	141.8	148.1	148.7	150.9
Railroad fares, coach		117.0	117.0	117.0	117.0	117.0	117.0	117.0	118.1	118.1	118.1	118.1	118.1
Medical care		105.1	105.4	107.0	108.0	109.9	111.0	111.8	114.3	115.7	117.8	118.8	119.3
Medical care less hospital rates and group hospitalization		104.2	104.6	105.5	106.3	108.0	108.3	109.2	110.2	111.0	111.5	112.4	113.0
Physicians' fees		103.7	103.8	104.6	105.1	107.2	107.6	108.6	110.3	111.7	112.6	114.0	114.3
General practitioners' fees		103.7	103.7	104.5	104.9	107.4	107.7	108.6	110.4	111.9	112.9	114.1	114.5
Office visit		103.2	103.2	104.4	104.9	106.8	107.1	108.4	109.2	110.8	112.0	113.0	113.1
House visit		104.2	104.2	104.7	104.7	107.9	107.8	107.7	108.8	109.5	110.6	112.2	113.0
Obstetrical care		103.9	103.9	104.2	105.8	107.6	109.5	111.7	119.2	122.3	122.7	123.5	123.7
Surgeons' fees		104.0	104.2	105.0	105.6	106.3	106.6	108.3	109.1	110.6	110.7	112.9	113.3
Appendectomy		103.5	103.5	105.1	105.8	105.8	106.1	109.3	109.6	110.8	111.2	113.5	113.8
Tonsillectomy		104.5	104.9	104.9	105.3	106.8	107.1	107.4	108.5	110.3	110.3	112.3	112.9
Dentists' fees		105.5	106.7	107.8	108.7	110.4	110.5	111.6	112.4	112.6	112.8	113.7	114.8
Fillings		105.5	106.7	107.7	108.7	109.6	109.8	111.2	111.8	112.3	112.6	113.8	115.1
Extractions		106.1	106.9	108.1	109.2	112.5	112.4	112.8	114.2	113.7	113.7	113.7	114.0
Optometric examination and eyeglasses		104.0	104.2	104.0	106.4	108.9	109.4	109.7	109.9	110.4	110.7	110.5	110.9
Hospital rates		113.4	113.5	114.5	119.1	125.3	127.3	127.9	131.2	137.3	140.0	141.6	143.4
Men's pay ward		115.5	116.7	117.5	121.6	129.7	131.7	132.5	135.7	143.1	146.0	147.2	149.5
Semiprivate room		113.3	113.3	114.7	119.7	124.7	126.8	127.6	131.4	136.7	138.8	139.7	141.3
Private room		111.6	110.5	111.6	116.5	120.9	122.9	123.2	126.5	131.5	134.0	136.5	137.9

See footnotes at end of table.

Table 12. Consumer Price Index--United States city average: Indexes of selected items and groups, quarterly, 1947-58 (Cont'd)

(1947-49=100 unless otherwise specified)

Item and group	Other index bases	1950				1951				1952			
		Mar.	June	Sept.	Dec.	Mar.	June	Sept.	Dec.	Mar.	June	Sept.	Dec.
Medical Care--Continued													
Group hospitalization	Dec 52	-----	-----	-----	83.1	83.6	85.5	85.5	90.3	91.9	99.3	100.2	100.0
Prescriptions and drugs		103.0	103.2	104.7	105.8	106.6	106.8	107.5	107.4	107.7	107.8	107.9	108.5
Prescriptions		105.1	105.5	108.4	110.5	111.6	112.2	113.1	112.8	113.4	113.6	113.6	114.3
Aspirin tablets		100.3	100.3	99.4	99.4	99.4	99.4	99.4	99.4	100.0	99.4	99.4	99.4
Milk of magnesia		100.5	100.5	100.5	100.5	100.5	100.6	101.0	101.2	101.4	101.4	101.4	101.4
Multiple vitamin concentrate	Dec 52	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	100.0
Personal care		99.1	99.2	101.3	107.4	110.7	110.8	110.0	111.1	111.0	111.7	112.1	112.5
Men's haircuts		104.7	107.2	108.4	116.2	118.2	118.2	118.5	122.0	123.5	128.4	130.0	131.5
Beauty shop services		98.4	97.9	98.2	98.8	100.9	101.8	102.0	103.4	103.5	104.4	104.4	104.4
Shampoo and wave set		99.8	99.5	99.8	100.6	103.3	104.3	104.7	107.0	107.1	108.3	108.7	109.1
Permanent wave		96.7	95.8	96.1	96.3	97.5	98.5	98.3	98.5	98.5	98.9	98.3	97.9
Toilet goods		93.7	93.4	95.5	104.3	107.8	107.9	105.9	105.9	104.9	104.2	104.1	104.1
Toothpaste		100.2	100.2	100.9	110.1	110.6	110.4	108.6	108.6	106.6	106.7	106.8	106.7
Face powder		106.5	106.8	107.0	130.4	131.4	132.5	132.5	132.7	132.7	132.7	132.7	132.7
Toilet soap		80.7	79.8	84.2	89.3	95.5	94.8	89.7	88.9	86.7	84.1	83.8	83.7
Razor blades		100.4	100.4	100.4	100.4	100.4	100.9	100.9	100.9	100.9	100.9	100.9	100.9
Sanitary napkins		106.8	106.8	107.4	112.6	122.0	122.4	122.0	123.7	124.6	125.0	125.2	125.2
Cleansing tissue	Dec 52	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	100.0
Shaving cream	Dec 52	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	100.0
Face cream	Dec 52	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	100.0
Shampoo	Dec 52	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	100.0
Home permanent refill	Dec 52	-----	-----	-----	84.2	84.2	84.2	84.2	84.2	90.2	97.1	100.0	100.0
Reading and recreation		104.4	102.5	102.7	104.1	107.0	106.5	105.8	106.5	106.3	106.8	107.3	108.0
Motion-picture admissions		102.6	100.6	101.1	102.0	104.5	102.8	102.7	102.9	103.7	104.8	103.9	104.0
Adults		103.1	101.2	101.7	102.7	105.6	104.4	104.3	104.5	105.1	106.6	105.6	105.6
Children		99.9	98.1	98.7	98.7	97.5	93.0	92.2	92.5	95.1	93.3	93.2	94.5
Newspapers		107.9	107.9	108.7	108.0	109.0	109.6	109.6	112.8	112.8	114.7	120.2	121.1
Television sets	Dec 52	-----	-----	-----	117.9	123.1	118.5	108.6	108.4	104.1	100.7	99.2	100.0
Radios, table	Dec 52	88.4	88.1	91.6	95.2	99.2	99.5	100.2	100.0	99.8	100.5	100.3	100.0
Toys	Dec 52	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	100.0
Sporting goods	Dec 52	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	100.0
Television repairs	Dec 52	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	100.0

Other goods and services		103.9	103.7	106.8	107.9	108.9	109.1	109.6	112.8	114.8	115.7	115.9	115.9
Tobacco products		103.8	103.7	107.1	107.5	107.7	108.0	108.2	113.1	112.9	114.4	114.4	114.5
Cigars		103.3	103.3	103.7	105.1	104.9	106.4	107.8	107.8	106.4	106.0	106.1	107.2
Cigarettes		103.7	103.5	107.9	108.2	108.3	108.4	108.5	114.0	114.0	115.6	115.6	115.6
Alcoholic beverages	Dec 52	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	100.0
Beer	Dec 52	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	100.0
Whisky	Dec 52	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	100.0

See footnotes at end of table.

Table 12. Consumer Price Index--United States city average: Indexes of selected items and groups, quarterly, 1947-58 (Cont'd)

(1947-49=100 unless otherwise specified)

Item and group	Other index bases	1953				1954				1955			
		Mar.	June	Sept.	Dec.	Mar.	June	Sept.	Dec.	Mar.	June	Sept.	Dec.
All items		113.6	114.5	115.2	114.9	114.8	115.1	114.7	114.3	114.3	114.4	114.9	114.7
All items less food		115.1	115.5	116.3	116.6	116.5	116.3	116.3	116.6	116.4	116.3	116.9	117.6
All items less shelter		112.4	113.3	113.8	113.4	113.1	113.4	112.7	112.2	112.2	112.3	112.7	112.4
Commodities		110.7	111.5	111.7	111.0	110.6	110.8	109.7	109.1	109.0	108.9	109.2	108.7
Nondurables		110.5	111.6	112.1	111.5	111.2	112.0	111.3	110.1	110.2	110.4	111.1	110.2
Nondurables less food		109.7	109.6	110.7	111.1	110.9	110.4	110.4	110.4	110.2	109.9	111.1	111.6
Nondurables less food and apparel		114.6	114.5	115.9	116.6	116.8	116.1	116.2	116.0	116.4	116.0	117.1	117.9
Durables		113.4	112.8	112.3	110.9	110.1	108.7	106.2	107.0	106.2	104.7	103.7	105.1
Durables less cars		107.3	107.1	106.8	106.4	105.9	103.7	102.9	102.5	101.8	101.0	101.1	100.3
Commodities less food		110.0	109.8	110.2	110.0	109.4	108.6	107.7	108.1	107.6	107.0	107.3	108.1
Services		122.7	123.8	125.4	126.2	126.8	127.3	128.1	128.5	129.0	129.6	130.4	130.9
Services less rent		123.3	124.3	125.6	126.3	126.9	127.5	128.4	128.7	129.2	129.9	130.8	131.3
Household operation services, gas, and electricity		116.1	117.2	117.8	118.3	118.6	117.7	117.9	118.4	119.1	120.9	121.8	122.3
Household utilities 1/		111.0	111.8	112.7	113.5	113.8	112.2	112.4	113.1	114.2	115.3	115.8	115.9
Transportation services		145.0	145.8	150.3	150.5	154.0	153.8	153.9	154.4	154.8	153.7	153.3	153.6
Medical care services		122.3	123.7	124.5	126.0	126.4	127.3	128.2	129.3	130.6	130.8	131.6	133.4
Other services		112.4	113.2	114.1	114.7	114.7	116.1	117.4	117.3	117.4	118.1	119.3	119.3
Food		111.7	113.7	113.8	112.3	112.1	113.8	112.4	110.4	110.8	111.3	111.6	109.5
Food at home		111.3	113.7	113.5	111.7	111.4	113.3	111.6	109.2	109.7	110.3	110.4	107.9
Cereals and bakery products		117.7	118.9	120.3	120.9	121.2	121.3	122.6	123.3	123.9	124.0	124.0	123.9
Meats, poultry, and fish		107.4	111.3	113.5	107.8	109.5	111.1	106.7	102.2	102.3	103.8	103.5	94.6
Dairy products		110.3	107.5	109.6	110.3	108.0	102.9	105.8	106.8	105.4	104.1	106.5	107.7
Fruits and vegetables		115.5	121.7	106.6	109.2	107.8	117.1	110.5	108.4	112.0	119.5	110.2	110.7
Other foods at home		109.1	110.9	116.7	113.5	112.3	115.2	116.0	112.0	111.9	107.7	114.1	113.7
Food away from home	Jan 53	100.1	100.2	101.0	101.7	101.9	102.3	102.7	102.8	102.9	102.9	103.6	104.3
Housing 2/		116.8	117.4	118.4	118.9	119.0	118.9	119.5	119.7	119.6	119.7	120.4	120.8
Rent		121.7	123.3	126.0	127.6	128.0	128.3	128.8	129.4	130.0	130.4	130.5	131.1
Home maintenance and repairs	Dec 52	100.6	101.6	103.0	103.2	103.6	103.6	103.8	103.7	104.4	105.8	107.1	107.7
Exterior house paint	Dec 52	100.3	99.9	99.6	102.6	103.5	102.7	102.7	103.1	103.0	103.5	103.8	104.3

Exterior house paint	Dec 52	100.3	99.9	99.8									
Porch flooring	Dec 52	100.9	101.4	100.0	100.7	100.9	101.2	102.6	103.1	104.1	105.3	105.3	106.3
Water heaters	Dec 52	100.7	101.3	101.7	101.8	102.2	100.3	100.3	100.3	100.5	101.4	102.9	104.0
Cabinet kitchen sinks	Dec 52	100.4	100.1	101.4	101.5	101.7	101.7	101.3	100.1	100.4	101.9	104.1	104.2
Sink faucets	Dec 52	100.1	101.5	104.0	102.6	102.6	102.4	102.7	102.6	104.2	105.7	108.7	112.7
Repainting rooms	Dec 52	100.8	105.1	107.7	107.9	108.4	110.2	110.3	110.0	110.5	114.7	115.5	115.0
Repainting garage	Dec 52	101.1	105.5	108.1	108.4	109.3	111.6	111.3	111.4	111.7	115.3	116.8	116.7
Refinishing floors	Dec 52	100.3	101.5	104.4	103.4	103.0	104.5	106.7	106.5	106.2	107.8	110.0	110.8
Reshingling roof	Dec 52	100.9	102.3	106.9	108.2	109.6	110.6	110.6	111.1	111.5	113.0	115.9	117.2
Other home-owner costs:													
First mortgage interest rates	Dec 52	(4/)	(4/)	105.8	(4/)	(4/)	(4/)	105.0	(4/)	(4/)	(4/)	105.3	(4/)
Property insurance rates	Dec 52	(4/)	100.0	(4/)	100.0	(4/)	99.9	(4/)	99.8	(4/)	94.5	(4/)	94.6
Gas and electricity		106.5	106.4	106.9	107.2	107.6	107.6	107.9	109.1	110.3	110.7	111.2	111.5
Gas		108.4	108.8	109.8	110.7	110.8	110.9	111.0	112.8	115.0	115.5	116.4	116.9
Electricity		104.5	104.1	104.1	103.8	104.5	104.5	104.9	105.5	105.8	106.2	106.2	106.4
Solid fuels and fuel oil		124.4	121.8	124.6	125.3	125.8	120.9	122.4	125.5	126.2	122.7	125.2	128.0
Solid fuels		125.3	122.0	124.7	125.6	125.6	120.1	121.9	123.9	124.4	119.7	123.3	126.3
Petroleum fuels		119.3	117.8	120.6	121.1	122.2	118.4	119.3	124.0	124.9	123.2	124.2	126.6
Household operation		114.0	115.4	116.0	117.0	117.5	117.2	117.4	117.7	117.9	119.2	119.8	120.7
Laundry soaps and detergents		89.1	89.3	89.5	89.6	91.6	94.6	94.9	95.0	95.1	94.9	95.4	96.9
Laundry services		122.4	123.3	123.9	124.3	124.4	124.4	124.8	125.0	125.3	126.1	127.5	129.7
Dry cleaning and pressing		114.1	116.6	116.6	116.4	116.1	116.4	116.7	116.9	116.4	117.9	119.5	120.1
Domestic service		120.1	120.2	120.6	120.6	121.7	121.8	121.8	121.8	122.3	122.3	122.9	122.9
Telephone		120.8	123.2	125.4	125.4	125.4	119.4	119.4	119.6	119.7	119.7	120.3	120.3
Postage		119.1	119.1	119.1	129.7	129.9	129.9	129.9	129.9	129.9	129.9	129.9	129.9
Water	Dec 52	(4/)	101.4	(4/)	(4/)	(4/)	103.1	(4/)	(4/)	(4/)	117.8	(4/)	(4/)
Housefurnishings		108.0	108.0	108.1	108.1	107.2	105.8	106.0	105.4	104.6	103.8	103.6	103.4
Textiles	Dec 52	99.8	98.6	97.7	98.1	95.2	93.7	93.8	93.6	92.6	92.0	92.2	95.4
Towels, bath		115.0	114.0	113.4	114.2	113.1	113.1	111.1	109.7	108.6	110.8	110.1	111.3
Sheets, muslin		100.6	97.5	95.8	95.8	89.3	84.9	85.5	87.7	85.5	83.3	82.5	88.1
Curtains		106.4	106.4	105.2	105.0	102.1	101.5	102.9	100.1	100.4	99.9	99.9	104.8
Blankets, wool		(4/)	(4/)	124.9	127.6	(4/)	(4/)	122.6	120.9	(4/)	(4/)	122.4	130.3
Bedspreads, cotton	Dec 52	100.3	100.4	100.6	101.4	98.8	98.9	99.2	99.9	99.8	100.0	99.8	99.7
Drapery fabric, cotton	Dec 52	100.0	98.3	96.9	96.8	96.8	95.9	95.4	94.6	94.2	94.1	94.4	94.6
Floor coverings:													
Rugs, wool Axminster		142.3	142.3	142.0	141.6	140.7	140.0	143.7	144.4	144.1	142.1	144.0	144.4
Carpets, wool broadloom		118.1	117.7	117.8	116.5	113.1	110.9	111.6	113.7	113.6	113.2	114.8	115.7
Carpets, rayon broadloom	Dec 52	99.9	98.3	96.5	93.3	95.3	94.9	97.1	95.2	94.4	94.4	96.0	96.8
Rugs, felt base		107.1	107.8	110.3	111.3	115.1	115.3	116.0	116.0	118.4	119.4	118.3	118.4

See footnotes at end of table.

Table 12. Consumer Price Index--United States city average: Indexes of selected items and groups, quarterly, 1947-58 (Cont'd)

(1947-49=100 unless otherwise specified)

Item and group	Other index bases	1953				1954				1955			
		Mar.	June	Sept.	Dec.	Mar.	June	Sept.	Dec.	Mar.	June	Sept.	Dec.
Housing--Continued													
Housefurnishings--Continued													
Furniture and bedding		109.6	110.1	109.7	109.3	108.8	108.6	108.8	108.7	107.6	106.3	106.6	106.7
Furniture		108.1	108.9	108.7	108.1	107.4	107.3	107.6	107.3	105.9	104.3	104.8	104.7
Living room suites		107.7	108.0	108.4	108.6	108.2	109.3	111.2	111.8	109.6	108.5	109.7	109.1
Dinette sets		103.9	104.9	104.4	102.6	102.7	101.4	101.4	100.5	99.0	97.7	99.9	100.9
Bedroom suites		110.7	112.0	111.2	110.7	109.1	108.7	107.5	106.8	106.4	102.5	102.4	102.3
Bedding:													
Sofa beds		111.5	110.1	109.1	109.6	109.8	108.5	109.4	109.1	109.9	108.7	109.4	109.4
Mattresses		113.0	112.7	111.4	111.1	111.0	111.5	111.6	112.1	111.7	112.4	111.7	112.6
Appliances 1/		97.5	97.0	96.8	96.1	95.1	92.9	91.3	90.1	89.4	88.6	87.8	85.9
Sewing machines		114.1	115.5	116.4	119.0	119.7	119.2	118.5	117.7	115.7	116.1	115.4	115.3
Washing machines		105.8	106.0	106.0	105.3	104.2	103.1	102.9	102.5	101.0	100.6	100.7	98.0
Vacuum cleaners		109.3	112.8	112.4	113.1	113.6	109.9	112.8	110.8	110.1	106.2	107.8	106.4
Refrigerators		98.0	96.0	96.1	94.6	93.1	88.8	88.6	86.7	87.7	86.9	82.3	78.0
Ranges		105.2	107.1	107.0	108.1	108.3	104.5	103.5	101.4	102.4	101.9	104.2	101.2
Toasters	Dec 52	100.5	100.8	101.7	101.5	100.4	96.3	96.3	95.7	86.3	86.1	85.5	84.3
Miscellaneous housefurnishings:													
Dinnerware		118.0	118.0	118.8	121.0	122.1	122.3	122.9	122.8	124.3	125.0	123.6	124.7
Aluminum pans	Dec 52	101.5	102.1	101.9	103.4	103.8	104.2	104.6	104.6	105.1	106.5	107.7	120.1
Paper napkins	Dec 52	99.0	99.4	99.4	99.2	99.2	99.4	98.5	99.1	99.6	99.5	100.0	100.0
Toilet tissue		103.5	103.4	103.4	103.5	103.0	103.6	103.0	101.8	102.1	101.0	101.8	101.0
Electric light bulbs	Dec 52	99.7	110.1	111.5	111.1	111.0	109.4	109.3	115.2	118.2	121.4	120.0	120.5
Apparel		104.7	104.6	105.3	105.3	104.3	104.2	104.3	104.3	103.2	103.2	104.6	104.7
Men's and boys'		107.3	107.2	107.5	107.6	107.2	107.0	106.4	106.5	105.6	105.6	105.8	106.1
Women's and girls'		99.6	99.2	100.5	100.5	99.0	98.5	99.0	99.0	97.4	97.2	99.5	99.1
Footwear		114.5	115.3	115.3	116.1	116.1	116.3	116.5	116.9	116.7	117.4	118.1	119.8
Other apparel		92.4	92.3	92.5	90.9	90.0	91.0	90.9	91.1	90.4	90.1	91.0	91.1
Wool apparel		(4/)	(4/)	116.0	115.1	(4/)	(4/)	116.0	114.0	(4/)	(4/)	115.2	114.5
Men's:													
Topcoats		111.2	(4/)	112.8	115.0	114.3	(4/)	112.6	112.5	111.1	(4/)	112.6	112.8
Suits, year-round		113.6	113.7	114.8	114.8	115.3	115.7	115.8	115.7	116.1	116.0	116.4	116.4
Suits, summer		(4/)	113.9	(4/)	(4/)	116.5	115.0	(4/)	(4/)	114.0	114.7	(4/)	(4/)
Trousers		101.7	101.5	103.6	104.1	103.4	104.1	103.6	103.6	104.5	105.0	105.5	105.5

Sweaters		(4/)	(4/)	123.3	123.1	(4/)	(4/)	120.7	121.3	(4/)	(4/)	121.2	121.4
Women's:													
Coats, heavy, plain		(4/)	(4/)	123.9	122.6	(4/)	(4/)	122.6	116.9	(4/)	(4/)	119.1	117.7
Coats, light, plain		108.6	(4/)	(4/)	(4/)	108.5	(4/)	(4/)	(4/)	105.0	(4/)	(4/)	(4/)
Suits		107.7	(4/)	107.9	103.1	109.0	(4/)	106.0	102.2	100.6	(4/)	101.4	100.0
Dresses		(4/)	(4/)	100.7	105.1	(4/)	(4/)	104.0	103.3	(4/)	(4/)	107.7	108.6
Children's:													
Boys' suits		117.7	(4/)	120.1	120.5	121.2	(4/)	121.2	122.1	121.8	(4/)	122.4	122.8
Girls' coats		(4/)	(4/)	110.2	106.9	(4/)	(4/)	110.7	106.1	(4/)	(4/)	112.4	108.7
Girls' skirts	Dec 52	(4/)	(4/)	100.3	101.9	(4/)	(4/)	101.5	101.5	(4/)	(4/)	102.0	103.0
Cotton apparel		99.6	99.6	99.8	99.5	99.3	99.1	98.5	98.4	98.3	99.1	99.7	100.0
Men's:													
Shirts, business		96.6	97.3	97.5	97.9	96.8	96.8	96.5	96.4	96.2	95.9	95.6	95.7
Shirts, sport	Jun 55	----	----	----	----	----	----	----	----	----	100.0	101.6	102.1
Pajamas		91.8	91.8	92.4	91.6	90.7	90.6	90.5	90.6	90.8	90.6	90.6	90.7
Shorts, woven		98.2	97.9	97.4	97.5	96.4	96.2	96.5	95.8	94.9	95.1	95.4	96.0
Undershirts		100.4	100.0	100.7	100.6	99.4	99.7	99.6	99.5	99.6	99.5	99.6	99.9
Socks		103.9	103.8	104.5	104.6	106.7	106.2	105.9	105.8	105.8	105.4	106.5	106.5
Trousers, work		105.5	106.1	104.5	104.0	103.4	103.1	102.9	102.6	101.3	101.2	101.4	101.8
Dungarees		112.0	110.6	110.7	110.6	109.3	108.8	106.4	106.4	106.2	106.1	106.3	106.3
Shirts, work		96.1	96.4	96.4	96.6	96.1	95.1	92.6	92.5	92.1	92.9	94.2	95.0
Gloves, work	Dec 52	100.5	96.6	96.4	95.9	95.0	94.8	91.7	91.7	91.5	90.7	91.0	91.2
Women's:													
Dresses, street		102.5	103.1	(4/)	(4/)	105.7	105.2	(4/)	(4/)	108.4	111.3	(4/)	(4/)
Dresses, house		94.9	95.2	95.0	94.4	94.9	95.2	94.2	94.2	94.1	94.2	94.9	94.8
Blouses	Mar 56	----	----	----	----	----	----	----	----	----	----	----	----
Children's:													
Girls' dresses		104.2	104.2	107.3	107.5	108.7	108.1	106.9	106.8	103.8	101.6	104.8	105.3
Girls' panties		103.6	104.0	103.9	104.5	103.1	103.0	103.6	104.7	104.3	102.8	105.3	106.4
Girls' anklets		105.4	105.3	107.3	107.9	107.9	107.5	107.3	107.3	106.7	104.8	105.1	105.1
Boys' shirts		98.9	98.8	99.5	99.3	99.4	97.4	95.9	95.1	95.3	94.7	94.3	95.2
Boys' shorts		102.4	102.3	102.8	102.9	103.1	102.9	102.8	101.0	98.3	98.3	98.5	99.1
Boys' jeans	Dec 52	100.6	100.2	98.9	97.8	96.3	95.9	94.9	95.2	93.9	93.5	92.1	92.4
Other cotton apparel:													
Diapers		96.9	96.7	96.0	88.6	87.2	91.2	90.9	91.4	91.1	91.0	91.5	91.5
Yard goods, percale		92.1	92.1	92.2	91.7	91.0	91.1	91.2	91.5	92.2	91.0	91.5	91.4

See footnotes at end of table.

Table 12. Consumer Price Index--United States city average: Indexes of selected items and groups, quarterly, 1947-58 (Cont'd)

(1947-49=100 unless otherwise specified)

Item and group	Other index bases	1953				1954				1955			
		Mar.	June	Sept.	Dec.	Mar.	June	Sept.	Dec.	Mar.	June	Sept.	Dec.
Apparel—Continued													
Manmade fibers apparel		87.0	86.7	86.7	86.7	85.7	85.2	85.0	84.7	84.1	82.3	83.2	83.0
Men's:													
Suits, rayon	Jun 53	(1/)	100.0	(1/)	(1/)	99.9	101.9	(1/)	(1/)	101.0	99.1	(1/)	(1/)
Slacks, rayon	Dec 52	100.6	101.0	100.4	99.5	99.1	99.5	99.4	98.8	96.8	95.4	96.3	96.6
Jackets	Dec 52	(1/)	(1/)	95.5	94.1	(1/)	(1/)	90.8	91.5	(1/)	(1/)	89.0	89.9
Sport shirts, rayon	Dec 52	99.7	98.9	99.3	98.8	99.7	99.7	99.2	99.1	97.5	97.5	97.9	97.7
Socks, nylon, stretch	Jun 56	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Women's:													
Dresses, rayon		89.5	89.7	90.8	91.5	90.1	89.5	91.1	90.9	90.5	88.8	92.9	92.5
Slips, rayon and nylon		83.3	82.7	82.5	82.2	81.9	80.7	81.7	81.2	81.5	80.4	79.1	78.9
Panties, rayon		100.1	100.6	101.0	101.7	100.4	100.3	99.3	98.8	98.8	98.6	98.1	98.3
Nightgowns, rayon		86.5	87.1	87.1	87.2	86.1	86.1	84.7	86.7	86.8	87.0	87.8	87.2
Hose, nylon		80.5	80.6	80.3	80.1	78.6	77.9	76.5	76.2	75.7	75.4	74.6	74.1
Suits, rayon	Dec 52	103.3	(1/)	106.6	106.9	104.9	(1/)	103.1	99.9	99.9	(1/)	99.0	100.6
Skirts, rayon	Dec 52	96.2	96.5	97.8	97.9	98.2	98.0	96.9	96.3	96.3	96.0	101.9	100.9
Blouses	Dec 52	97.2	94.0	93.0	92.4	92.8	91.7	94.1	93.9	90.1	90.7	92.9	94.0
Children's:													
Boys' slacks	Dec 52	100.0	100.5	99.8	99.4	99.4	94.8	95.4	97.2	97.0	96.9	97.2	95.6
Boys' jackets	Dec 52	(1/)	(1/)	95.7	96.7	(1/)	(1/)	90.1	87.9	(1/)	(1/)	90.7	88.9
Girls' sweaters, orlon	Dec 52	(1/)	(1/)	100.6	100.4	(1/)	(1/)	99.8	99.4	(1/)	(1/)	91.1	90.2
Other manmade fibers apparel:													
Yard goods, rayon		69.5	69.1	69.9	69.7	69.2	69.5	69.9	69.8	69.7	68.9	69.1	69.1
Miscellaneous apparel	Dec 52	100.1	99.7	99.3	98.6	97.9	94.6	94.5	94.4	94.3	93.8	95.9	96.0
Women's coats, fur		(1/)	(1/)	89.7	85.9	(1/)	(1/)	73.1	71.6	(1/)	(1/)	74.3	73.2
Women's girdles		128.0	127.4	127.9	127.9	128.4	128.0	129.1	129.1	129.3	128.8	129.6	130.8
Shoes		113.1	113.7	113.9	114.7	115.0	115.6	115.8	116.0	115.9	116.6	117.6	119.4
Men's:													
Shoes, street		117.5	119.3	118.5	119.0	119.9	119.9	119.8	120.0	120.0	120.8	121.5	123.2
Shoes, work		113.1	113.5	113.9	114.1	114.0	113.7	113.9	114.1	113.1	113.6	113.9	116.2
Women's:													
Shoes, street		109.0	110.2	110.0	110.5	110.3	111.6	112.3	112.2	112.4	113.3	113.7	115.7
Shoes, play	Dec 52	98.4	97.5	98.0	101.3	101.1	101.3	99.7	100.1	99.5	100.5	104.5	105.4
Children's:													
Shoes, oxford		115.0	114.8	116.1	116.1	116.9	117.6	118.6	119.3	119.2	119.4	120.2	121.9

Children's:													
Shoes, oxford		115.0	114.8	116.1	116.1	116.9	117.8	118.0					
Shoe repairs		114.2	114.3	114.6	114.3	114.3	114.4	114.2	114.4	115.2	115.5	115.3	115.5
Transportation													
Private		129.3	129.4	130.7	128.9	129.0	128.9	126.4	127.3	127.3	125.8	125.3	127.3
Automobiles, new		122.2	122.1	122.8	120.8	120.5	120.2	117.4	118.4	118.2	116.5	115.8	117.8
Automobiles, used		126.5	126.3	126.5	124.2	127.2	127.5	117.2	126.0	122.3	119.2	112.7	123.0
Tires	Jan 53	97.3	93.7	90.8	86.3	79.4	79.7	79.9	76.7	76.7	75.7	75.6	71.6
Gasoline		130.0	128.7	129.4	132.0	132.4	119.1	114.8	118.9	123.1	123.1	127.7	130.5
Motor oil		114.7	116.1	121.9	121.5	121.5	121.0	119.8	120.0	120.8	122.4	123.9	124.4
Auto repairs		106.9	107.8	111.2	112.2	112.4	112.4	112.1	112.1	112.6	112.6	112.4	112.9
Auto registration		121.0	122.9	123.9	125.1	126.5	125.5	127.8	128.7	128.5	128.9	130.7	131.8
Auto insurance		106.7	106.7	106.7	106.7	115.0	115.0	115.0	115.0	115.4	116.0	116.0	116.0
Public		148.8	149.5	149.3	148.7	148.3	148.0	146.9	146.9	145.5	142.0	138.3	138.4
Transit fares		146.9	149.0	155.3	155.7	159.3	161.5	162.3	162.8	164.6	165.1	166.9	167.8
Railroad fares, coach		151.9	153.1	161.4	161.9	166.7	171.6	172.7	173.3	175.8	176.3	178.6	179.9
		118.1	122.8	122.8	122.8	122.8	117.5	117.5	117.5	117.5	117.5	117.5	117.5
Medical care		119.5	121.1	122.6	123.6	124.4	125.1	125.7	126.3	127.0	127.6	128.2	130.2
Medical care less hospital rates and group hospitalization		113.0	114.0	114.6	115.5	115.5	116.2	116.6	117.2	117.7	118.2	118.8	120.3
Physicians' fees		114.7	115.4	116.2	117.8	118.1	119.0	119.6	121.3	122.4	123.0	123.9	125.0
General practitioners' fees		115.0	115.7	116.5	118.4	118.6	119.6	120.2	122.2	123.4	124.0	125.0	126.3
Office visit		114.3	114.8	116.6	119.3	119.3	120.1	120.8	122.2	123.3	123.3	123.9	125.4
House visit		112.6	113.6	113.6	114.7	115.2	115.6	116.2	117.7	119.2	120.5	121.9	123.1
Obstetrical care		124.8	125.3	125.5	127.0	127.3	131.1	131.8	138.4	139.2	139.9	140.2	140.9
Surgeons' fees		113.4	113.8	114.1	114.9	115.1	115.3	115.2	115.3	116.0	116.1	117.0	116.8
Appendectomy		113.8	113.8	114.0	115.1	115.1	115.3	114.5	114.6	114.6	114.7	116.2	115.7
Tonsillectomy		113.2	114.2	114.8	115.1	115.8	116.0	117.1	117.5	119.4	119.3	119.3	119.6
Dentists' fees		114.8	116.7	117.9	120.4	120.5	120.9	121.1	121.6	122.5	121.6	121.8	122.6
Fillings		115.0	116.5	117.7	119.8	120.0	120.4	120.6	121.0	121.6	120.8	121.1	121.8
Extractions		114.6	118.1	119.4	123.5	123.4	123.7	124.2	125.4	127.1	125.3	125.9	126.7
Optometric examination and eyeglasses		110.5	109.2	108.8	108.2	108.5	107.5	108.0	108.2	109.1	109.3	110.1	110.3
Hospital rates		145.6	146.8	151.0	152.6	155.6	156.9	157.6	159.5	161.6	165.0	166.4	166.9
Men's ward		152.4	152.9	158.4	160.4	163.5	164.7	165.1	166.2	170.4	175.1	176.5	176.9
Semiprivate room		143.0	144.7	148.6	150.3	152.5	153.4	154.2	155.9	157.3	160.6	161.9	162.2
Private room		139.9	141.3	144.4	145.5	149.0	151.0	152.0	155.0	155.6	157.6	159.3	160.2

See footnotes at end of table.

Table 12. Consumer Price Index--United States city average: Indexes of selected items and groups, quarterly, 1947-58 (Cont'd)

(1947-49=100 unless otherwise specified)

Item and group	Other index bases	1953				1954				1955			
		Mar.	June	Sept.	Dec.	Mar.	June	Sept.	Dec.	Mar.	June	Sept.	Dec.
Medical Care--Continued													
Group hospitalization	Dec 52	101.4	104.2	107.9	108.7	111.8	112.4	113.7	113.7	114.7	115.0	115.3	118.7
Prescriptions and drugs		108.0	109.2	109.2	109.7	109.0	110.3	110.5	110.7	110.1	111.0	111.4	113.3
Prescriptions		113.4	113.5	113.1	114.1	115.2	116.0	116.2	116.6	115.2	117.2	117.8	120.4
Aspirin tablets		99.3	99.9	100.2	100.2	95.7	99.4	99.4	99.6	99.6	99.8	100.4	100.5
Milk of magnesia		101.4	111.2	111.6	112.2	112.2	112.1	112.5	112.5	112.5	112.5	112.6	121.9
Multiple vitamin concentrate	Dec 52	99.4	100.1	100.3	100.9	100.6	100.7	101.0	101.0	101.0	101.0	101.1	101.2
Personal care		112.4	112.6	112.9	113.6	114.1	112.7	113.5	113.6	113.5	114.7	116.6	117.9
Men's haircuts		131.5	131.5	131.5	132.2	132.7	132.7	133.6	134.3	134.7	139.7	146.9	149.3
Beauty shop services		104.7	106.6	107.1	108.2	108.2	108.5	110.0	110.4	110.7	111.4	111.7	112.2
Shampoo and wave set		109.5	112.6	113.5	115.3	115.3	115.9	117.5	118.0	118.4	119.4	120.1	120.9
Permanent wave		97.9	98.1	98.1	98.0	97.9	98.0	99.3	99.5	99.8	99.9	99.6	99.6
Toilet goods		103.9	103.9	104.1	104.1	104.9	102.4	103.2	103.1	103.0	103.0	103.7	104.2
Toothpaste		106.6	106.7	106.8	106.8	106.9	106.9	107.1	107.1	107.1	106.6	106.7	106.5
Face powder		132.7	133.4	134.1	134.1	134.1	122.8	124.6	123.5	122.1	119.9	120.0	120.0
Toilet soap		83.4	82.4	81.9	81.9	85.3	83.8	86.5	86.6	86.9	87.0	87.4	88.8
Razor blades		100.9	100.9	101.0	101.0	101.0	101.0	101.0	101.0	101.0	101.0	101.1	101.1
Sanitary napkins		125.2	125.2	125.3	125.3	126.1	126.1	126.1	126.1	126.1	126.1	126.2	126.2
Cleansing tissue	Dec 52	99.3	98.5	99.0	98.2	97.7	96.4	96.3	95.7	94.6	91.6	88.2	86.5
Shaving cream	Dec 52	100.0	100.0	100.2	100.2	100.3	100.3	100.4	100.4	100.4	105.0	106.0	107.9
Face cream	Dec 52	100.0	100.1	100.4	100.4	101.2	92.5	92.6	92.1	92.1	91.8	92.4	95.6
Shampoo	Dec 52	100.0	99.8	99.8	100.0	100.6	100.6	100.8	100.8	100.8	100.8	101.0	101.0
Home permanent refill	Dec 52	100.3	103.6	109.8	110.5	110.9	103.7	103.7	103.7	103.7	113.7	131.7	133.6
Reading and recreation		107.7	107.8	107.8	108.9	108.2	106.4	106.5	106.6	106.6	106.2	106.7	106.8
Motion-picture admissions		106.7	108.1	110.0	115.0	113.4	114.6	119.3	117.5	120.9	123.4	122.7	122.1
Adults		108.0	109.1	111.5	115.9	115.0	116.9	121.4	119.9	123.4	125.0	125.5	124.2
Children		98.1	100.5	100.9	107.6	103.4	101.9	107.4	104.6	107.6	113.2	108.5	110.0
Newspapers		121.1	120.9	120.9	120.9	120.7	120.9	120.9	121.5	123.2	123.7	123.7	123.7
Television sets	Dec 52	99.6	98.0	96.9	95.5	94.1	93.4	88.2	87.1	87.1	86.0	85.8	85.4
Radios, table	Dec 52	99.8	99.3	99.0	98.4	97.0	95.1	94.4	93.4	92.3	91.7	91.0	90.1
Toys	Dec 52	100.0	95.8	94.5	95.0	92.9	92.9	89.1	91.7	91.7	89.7	89.7	91.4
Sporting goods	Dec 52	98.0	98.0	97.1	96.0	96.5	92.5	92.8	92.8	90.8	89.4	90.3	90.3
Television repairs	Dec 52	103.4	105.4	106.4	109.9	111.2	112.9	113.8	113.8	116.0	117.9	118.0	119.9

Other goods and services		117.5	118.2	118.5	120.3	120.1	120.1	120.1	119.9	119.8	119.9	120.6	120.6
Tobacco products		118.8	119.6	119.8	120.8	102.8	120.8	120.8	121.0	120.9	121.1	121.6	121.9
Cigars		107.4	107.6	107.9	108.0	107.9	108.1	108.3	108.3	108.8	108.8	109.8	109.8
Cigarettes		120.5	121.3	121.6	122.6	122.6	122.6	122.6	122.8	122.7	122.8	123.3	123.7
Alcoholic beverages	Dec 52	99.9	100.2	100.3	103.5	103.2	103.2	103.0	102.6	102.5	102.5	103.2	103.0
Beer	Dec 52	99.9	100.3	100.4	105.4	105.0	104.9	104.7	104.1	103.9	103.7	103.8	104.0
Whisky	Dec 52	99.9	100.0	100.2	100.5	100.5	100.5	100.5	100.4	100.4	100.7	102.4	101.7

1/ Includes gas, electricity, telephone, water, and postage.
2/ Includes house purchase and real estate taxes not shown separately.

Table 12. Consumer Price Index--United States city average: Indexes of selected items and groups, quarterly, 1947-58 (Cont'd)

(1947-49=100 unless otherwise specified)

Item and group	Other index bases	1956				1957				1958			
		Mar.	June	Sept.	Dec.	Mar.	June	Sept.	Dec.	Mar.	June	Sept.	Dec.
All items		114.7	116.2	117.1	118.0	118.9	120.2	121.1	121.6	123.3	123.7	123.7	123.7
All items less food		117.7	118.1	119.4	120.8	122.0	122.5	123.4	124.5	125.0	125.2	125.8	126.5
All items less shelter		112.5	114.1	114.8	115.7	116.5	117.8	118.7	119.2	121.0	121.4	121.5	121.5
Commodities		108.5	110.3	111.0	111.8	112.4	113.7	114.5	114.7	116.4	116.6	116.4	116.3
Nondurables		110.2	112.6	113.2	113.4	114.0	115.8	116.7	116.4	118.8	119.2	118.7	117.8
Nondurables less food		112.1	112.3	113.9	114.7	115.6	115.8	116.7	117.3	116.9	116.7	117.2	117.0
Nondurables less food and apparel		118.8	119.0	120.6	121.6	123.3	123.9	125.0	125.8	125.7	125.4	126.0	125.4
Durables		104.3	103.8	104.8	108.0	108.6	108.4	108.6	110.3	109.6	109.6	110.3	112.9
Durables less cars		100.9	100.4	101.2	101.9	102.8	102.5	103.0	103.2	103.5	103.4	103.1	103.2
Commodities less food		108.1	108.0	109.4	111.1	111.9	111.9	112.6	113.6	113.1	112.9	113.5	114.4
Services		131.2	132.3	133.6	134.4	136.3	137.5	138.8	140.0	141.7	142.3	143.0	143.5
Services less rent		131.6	132.7	134.1	134.9	137.1	138.4	139.8	141.1	143.1	143.8	144.4	145.0
Household operation services, gas, and electricity		123.0	123.8	124.5	125.2	126.4	127.3	128.3	129.2	130.5	131.2	132.4	133.0
Household utilities 1/		116.1	116.8	117.4	117.4	118.1	119.1	120.0	120.4	122.4	123.2	125.1	125.3
Transportation services		155.5	156.4	157.0	157.9	161.3	162.8	166.1	167.7	173.3	174.2	175.4	176.2
Medical care services		134.9	135.6	137.8	138.7	140.6	142.0	143.3	145.0	146.7	148.5	151.2	152.4
Other services		118.7	120.0	121.5	122.2	124.6	125.7	127.1	128.2	129.6	129.9	129.4	129.8
Food		109.0	113.2	113.1	112.9	113.2	116.2	117.0	116.1	120.8	121.6	120.3	118.7
Food at home		107.3	112.1	111.7	111.2	111.4	114.7	115.5	114.3	119.6	120.4	118.7	116.9
Cereals and bakery products		124.4	125.2	126.6	127.4	129.8	130.6	131.2	131.8	132.7	132.9	133.5	134.0
Meats, poultry, and fish		92.8	98.0	101.3	98.0	100.6	106.9	110.3	106.0	114.4	118.3	115.8	113.0
Dairy products		106.9	107.7	109.8	111.3	110.7	110.0	113.1	114.6	114.1	111.7	114.1	111.3
Fruits and vegetables		114.8	131.4	114.8	117.4	116.1	126.8	114.8	113.9	130.7	134.3	120.7	120.1
Other foods at home		110.7	111.1	115.4	114.2	111.6	109.5	115.0	114.9	113.8	110.9	115.2	110.7
Food away from home	Jan 53	104.4	104.9	106.0	107.0	108.1	109.3	110.5	111.0	111.8	112.7	113.4	113.6
Housing 2/		120.7	121.4	122.5	123.5	124.9	125.5	126.3	127.0	127.5	127.8	127.9	128.2
Rent		131.6	132.5	133.4	134.2	134.4	135.0	135.7	136.7	137.1	137.7	138.2	138.7
Home maintenance and repairs	Dec 52	108.6	110.1	111.4	112.8	113.7	115.2	116.2	116.1	116.7	116.9	117.1	117.4
Exterior house paint	Dec 52	107.6	108.3	108.9	112.1	113.4	115.2	117.0	117.2	117.5	117.0	117.2	117.1

Porch flooring	Dec 52	107.8	108.0	108.2	107.9	109.8	109.8	109.8	109.8	109.4	108.8	108.4	108.3
Water heaters	Dec 52	104.0	104.4	104.7	105.3	105.8	105.6	105.5	104.5	105.7	105.7	104.8	103.0
Cabinet kitchen sinks	Dec 52	105.9	106.0	105.7	108.5	107.8	108.8	109.0	108.6	107.3	106.3	103.9	103.3
Sink faucets	Dec 52	114.5	116.3	119.0	120.1	121.4	123.1	123.8	124.5	125.4	125.7	126.8	128.1
Repainting rooms	Dec 52	115.4	118.7	120.7	122.4	123.2	126.1	128.8	128.9	129.7	131.0	132.7	133.2
Repainting garage	Dec 52	117.0	120.4	122.3	124.8	126.1	133.3	137.7	137.7	137.3	140.0	142.2	143.2
Refinishing floors	Dec 52	110.8	113.6	114.9	115.3	115.8	117.1	117.9	117.3	116.8	117.4	118.8	118.9
Reshingling roof	Dec 52	118.1	122.0	124.5	124.8	125.2	127.9	129.0	129.9	131.7	132.2	133.5	135.1
Other home-owner costs:													
First mortgage interest rates	Dec 52	(4/)	(4/)	107.5	(4/)	113.7	(4/)	116.5	(4/)	117.3	(4/)	114.1	(4/)
Property insurance rates	Dec 52	(4/)	94.8	(4/)	94.7	(4/)	97.1	(4/)	101.2	(4/)	105.8	(4/)	107.6
Gas and electricity		111.7	111.7	112.2	112.0	112.4	112.3	113.7	114.3	115.9	116.9	118.0	118.2
Gas		117.1	117.1	118.1	117.9	118.4	118.0	121.0	121.9	125.1	126.4	128.1	128.6
Electricity		106.5	106.7	106.6	106.5	106.9	106.9	106.9	107.3	107.6	108.2	108.7	108.7
Solid fuels and fuel oil		130.6	128.4	130.5	136.1	139.2	135.3	136.8	138.3	136.7	131.7	135.2	137.0
Solid fuels		128.3	124.7	128.3	135.7	136.2	131.5	135.7	138.3	139.0	133.1	136.2	137.5
Petroleum fuels		129.9	129.9	129.6	132.5	139.2	136.6	134.1	134.1	129.5	125.9	129.7	131.9
Household operation		121.6	122.6	123.7	124.8	126.2	127.6	128.3	129.6	130.7	131.1	132.2	132.8
Laundry soaps and detergents		95.9	96.3	99.4	100.2	101.0	101.6	102.4	104.9	105.6	106.1	105.8	106.2
Laundry services		131.9	133.1	134.5	135.2	136.1	137.4	138.5	139.0	141.7	141.8	142.7	143.1
Dry cleaning and pressing		120.7	122.0	123.2	125.4	126.5	127.7	128.0	128.2	128.8	128.6	128.7	128.7
Domestic service		125.5	125.6	126.1	128.1	128.7	130.4	130.9	134.5	134.1	134.7	133.6	136.0
Telephone		120.7	120.7	122.4	123.2	123.2	123.2	123.6	126.1	126.9	127.5	127.8	127.8
Postage		129.9	129.9	129.9	129.9	129.9	129.9	131.0	131.0	131.0	131.0	152.4	152.4
Water	Dec 52	(4/)	118.9	(4/)	(4/)	127.5	(4/)	(4/)	(4/)	136.4	(4/)	(4/)	(4/)
Housefurnishings		103.1	102.8	103.3	104.1	104.9	104.6	104.8	104.9	103.9	104.1	103.6	103.6
Textiles	Dec 52	94.1	93.7	94.8	95.4	95.4	95.2	95.7	95.2	94.5	94.0	93.1	93.5
Towels, bath		113.0	109.5	108.7	109.9	109.2	108.3	105.8	107.6	108.7	107.6	108.1	108.1
Sheets, muslin		87.9	88.2	90.1	91.7	91.9	91.7	92.2	92.4	89.8	88.1	86.6	89.1
Curtains		103.4	103.4	104.4	104.6	104.7	103.0	102.9	100.8	99.5	98.8	97.5	95.6
Blankets, wool		(4/)	(4/)	122.9	123.8	(4/)	(4/)	127.8	126.7	(4/)	(4/)	124.5	125.2
Bedspreads, cotton	Dec 52	100.0	99.9	99.9	99.5	99.9	100.3	100.6	101.0	100.5	100.6	101.0	101.5
Drapery fabric, cotton	Dec 52	94.2	93.5	93.5	93.6	93.6	94.6	94.8	94.0	94.5	95.2	95.1	95.0
Floor coverings:													
Rugs, wool Axminster		147.2	147.1	147.7	148.1	154.4	155.0	157.0	156.9	154.7	153.1	151.7	151.4
Carpets, wool broadloom		119.5	119.2	118.0	119.6	123.3	124.3	126.8	127.8	127.8	126.7	123.6	125.5
Carpets, rayon broadloom	Dec 52	97.6	96.9	95.4	96.0	96.4	95.5	95.5	94.7	93.0	91.9	91.3	90.9
Rugs, felt base		121.2	121.4	121.7	121.7	125.5	126.0	126.8	127.1	127.9	128.5	127.8	127.7

See footnotes at end of table.

Table 12. Consumer Price Index--United States city average: Indexes of selected items and groups, quarterly, 1947-58 (Cont'd)

(1947-49=100 unless otherwise specified)

Item and group	Other index bases	1956				1957				1958			
		Mar.	June	Sept.	Dec.	Mar.	June	Sept.	Dec.	Mar.	June	Sept.	Dec.
Housing--Continued													
Housefurnishings--Continued													
Furniture and bedding		106.1	107.1	108.3	109.8	110.2	110.7	110.2	110.5	110.0	109.5	109.7	109.3
Furniture		104.1	105.1	105.9	107.1	107.4	107.7	107.1	107.5	107.0	106.5	106.7	106.3
Living room suites		108.7	109.9	111.3	112.1	111.4	112.4	112.1	113.3	113.2	113.4	112.8	112.5
Dinette sets		99.0	100.9	103.0	106.0	107.2	107.7	108.6	107.9	107.6	108.2	109.6	108.9
Bedroom suites		102.4	102.5	101.8	102.3	103.0	102.5	100.3	101.0	99.8	97.7	97.8	97.8
Bedding:													
Sofa beds		110.9	112.2	113.7	116.2	117.4	117.3	116.9	116.0	115.8	116.0	115.9	114.8
Mattresses		110.3	110.9	114.7	117.0	117.5	119.3	119.7	119.8	119.5	118.7	119.1	119.1
Appliances 3/		84.7	83.6	83.6	84.1	84.4	84.4	83.7	84.7	82.9	82.4	82.8	82.8
Sewing machines		111.9	109.9	110.7	111.6	110.9	111.7	111.5	112.2	113.5	114.5	116.7	114.7
Washing machines		98.5	98.2	98.1	98.2	98.3	98.9	100.6	100.7	98.6	97.8	97.6	98.3
Vacuum cleaners		95.2	94.7	96.9	96.8	90.2	92.6	87.8	87.6	85.9	86.4	85.4	80.9
Refrigerators		75.8	72.8	70.4	69.8	71.8	66.8	63.8	64.2	64.8	65.3	64.7	64.2
Ranges		102.2	101.4	101.7	102.8	102.1	105.1	103.9	104.5	120.7	102.9	102.6	103.2
Toasters	Dec 52	78.5	78.0	77.9	77.6	80.8	82.5	83.0	82.2	67.2	68.0	69.5	69.5
Miscellaneous housefurnishings:													
Dinnerware		127.9	133.2	135.5	136.7	138.2	137.7	140.3	139.9	143.3	144.0	146.1	146.0
Aluminum pans	Dec 52	121.6	123.3	130.0	131.8	131.6	132.2	136.0	142.1	143.2	143.1	135.0	139.2
Paper napkins	Dec 52	99.9	100.2	100.3	100.8	102.0	101.3	101.4	102.0	102.8	101.9	103.1	102.9
Toilet tissue		100.4	100.4	100.6	103.5	104.4	105.3	105.7	106.6	107.0	108.0	106.9	108.0
Electric light bulbs	Dec 52	121.2	121.7	121.8	121.4	128.4	131.7	133.3	134.3	134.5	135.0	134.9	134.9
Apparel		104.8	104.8	106.5	107.0	106.8	106.6	107.3	107.6	106.8	106.7	107.1	107.5
Men's and boys'		106.6	107.5	108.3	108.6	108.8	109.1	109.3	109.5	108.9	108.8	108.3	108.4
Women's and girls'		98.3	97.5	99.6	100.3	99.3	98.5	99.8	100.1	98.8	98.5	99.6	100.2
Footwear		121.9	123.1	126.0	126.4	127.6	127.8	128.1	129.1	129.5	129.8	130.1	130.4
Other apparel		91.1	91.1	92.0	92.2	92.2	91.9	92.3	92.3	91.9	91.9	92.0	92.3
Wool apparel		(4/)	(4/)	117.5	116.0	(4/)	(4/)	118.9	117.0	(4/)	(4/)	118.6	117.3
Men's:													
Topcoats		112.3	(4/)	115.3	115.0	114.2	(4/)	115.7	115.7	112.0	(4/)	115.1	114.3
Suits, year-round		116.7	117.1	118.5	119.5	120.4	120.6	121.4	121.9	122.4	122.6	123.3	123.5
Suits, summer		114.4	115.2	(4/)	(4/)	116.8	118.0	(4/)	(4/)	119.8	121.3	(4/)	(4/)
Trousers		105.5	105.4	107.2	108.1	108.4	108.4	108.3	108.4	108.1	108.5	109.7	109.0

Sweaters		(1/)	(1/)	123.2	122.7	(1/)	(1/)	127.5	128.2	(1/)	(1/)	125.0	124.6
Women's:													
Coats, heavy, plain		(1/)	(1/)	123.6	120.7	(1/)	(1/)	122.8	119.9	(1/)	(1/)	122.1	120.7
Coats, light, plain		107.2	(1/)	(1/)	(1/)	109.4	(1/)	(1/)	(1/)	107.3	(1/)	(1/)	(1/)
Suits		101.7	(1/)	103.0	99.9	102.5	(1/)	102.6	96.5	102.0	(1/)	102.8	97.3
Dresses		(1/)	(1/)	108.2	105.3	(1/)	(1/)	107.6	106.1	(1/)	(1/)	105.1	103.6
Children's:													
Boys' suits		123.6	(1/)	125.0	125.2	127.2	(1/)	127.2	128.2	128.9	(1/)	125.6	124.9
Girls' coats		(1/)	(1/)	115.8	107.9	(1/)	(1/)	117.6	110.5	(1/)	(1/)	119.6	117.0
Girls' skirts	Dec 52	(1/)	(1/)	100.8	99.9	(1/)	(1/)	103.2	102.6	(1/)	(1/)	101.6	101.8
Cotton apparel		101.1	101.9	102.2	102.6	102.9	103.2	103.3	103.3	103.4	103.0	102.9	103.1
Men's:													
Shirts, business		95.4	95.4	95.4	95.5	96.9	96.3	96.6	97.0	96.9	96.8	96.8	96.9
Shirts, sport	Jun 55	103.0	105.0	105.5	105.4	105.1	110.4	109.9	109.8	108.4	107.2	106.8	106.3
Pajamas		91.3	91.3	91.4	91.5	91.7	91.7	91.7	91.6	91.0	91.2	91.2	90.6
Shorts, woven		95.7	96.3	96.3	96.3	96.3	97.5	98.3	98.4	97.8	97.3	97.4	97.4
Undershirts		101.8	101.7	101.2	101.3	101.5	104.0	104.2	104.4	102.9	102.2	102.2	101.9
Socks		108.6	108.8	109.8	110.1	110.4	110.4	108.6	108.8	108.9	109.0	108.6	108.6
Trousers, work		103.1	105.8	106.6	106.8	107.0	106.5	107.4	107.3	107.6	106.0	105.2	105.4
Dungarees		107.5	109.9	110.3	110.8	111.2	111.6	111.6	111.6	111.3	111.3	111.1	111.1
Shirts, work		95.7	99.7	101.7	102.0	102.2	102.6	102.7	102.7	102.9	103.0	102.9	102.7
Gloves, work	Dec 52	93.0	95.8	96.1	97.3	97.4	94.1	94.0	94.0	93.3	89.4	87.9	87.5
Women's:													
Dresses, street		115.9	116.9	(1/)	(1/)	117.5	118.3	(1/)	(1/)	117.9	118.5	(1/)	(1/)
Dresses, house		95.5	95.2	95.3	96.6	96.7	96.9	98.1	98.2	97.6	97.6	97.6	97.7
Blouses	Mar 56	100.0	100.5	102.6	101.3	101.5	100.4	99.9	101.0	101.4	101.6	100.3	100.6
Children's:													
Girls' dresses		105.7	103.3	106.8	108.7	107.1	106.5	109.3	106.9	110.1	108.2	109.9	111.4
Girls' panties		107.3	109.6	109.7	110.1	109.1	109.5	110.4	110.4	109.5	109.4	108.8	112.3
Girls' anklets		105.4	105.8	106.3	106.2	108.0	108.2	107.9	108.1	108.1	107.8	107.0	106.9
Boys' shirts		97.1	97.1	97.0	97.4	96.8	97.1	97.1	97.1	100.1	99.6	99.0	98.8
Boys' shorts		99.6	100.7	102.1	102.1	102.4	103.4	103.0	103.9	102.7	102.5	102.9	102.9
Boys' jeans	Dec 52	94.3	97.2	97.6	97.8	99.5	99.8	98.9	99.0	98.5	98.7	98.4	98.6
Other cotton apparel:													
Diapers		91.5	91.2	91.5	91.6	91.7	91.7	91.6	91.4	90.9	90.8	90.1	90.0
Yard goods, percale		91.4	91.7	91.9	91.8	91.8	91.8	92.1	91.6	92.0	92.0	92.4	91.9

See footnotes at end of table.

Table 12. Consumer Price Index--United States city average: Indexes of selected items and groups, quarterly, 1947-58 (Cont'd)

(1947-49=100 unless otherwise specified)

Item and group	Other index bases	1956				1957				1958			
		Mar.	June	Sept.	Dec.	Mar.	June	Sept.	Dec.	Mar.	June	Sept.	Dec.
Apparel--Continued													
Manmade fibers apparel		83.0	82.1	82.7	83.0	82.5	81.6	81.8	82.1	81.5	82.1	81.3	81.3
Men's:													
Suits, rayon	Jun 53	100.8	100.5	(1/)	(1/)	(1/)	102.5	(1/)	(1/)	105.9	108.5	(1/)	(1/)
Slacks, rayon	Dec 52	96.6	96.3	97.6	95.9	96.3	96.3	97.5	98.1	97.9	98.3	97.9	96.8
Jackets	Dec 52	(1/)	(1/)	89.5	91.1	(1/)	(1/)	89.0	88.4	(1/)	(1/)	83.0	83.0
Sport shirts, rayon	Dec 52	97.7	97.7	97.5	97.5	97.7	97.5	97.6	98.6	98.2	96.2	94.2	95.1
Socks, nylon, stretch	Jun 56	-----	100.0	100.2	100.0	100.1	100.0	99.3	99.6	99.0	99.4	95.8	95.0
Women's:													
Dresses, rayon		91.8	88.3	93.4	94.6	93.2	90.2	93.1	93.2	91.6	91.2	95.0	94.8
Slips, rayon and nylon		80.6	80.4	80.3	80.4	80.4	81.3	80.2	80.2	80.3	80.3	80.2	80.4
Panties, rayon		98.3	98.1	99.6	99.5	99.2	98.6	99.0	99.8	99.9	100.5	99.8	100.2
Nightgowns, rayon		86.8	87.6	87.8	88.2	88.4	86.0	86.0	86.0	86.0	86.1	86.1	86.1
Hose, nylon		73.6	73.3	71.6	72.5	70.9	70.0	69.3	70.4	69.8	69.3	68.4	68.9
Suits, rayon	Dec 52	100.6	(1/)	97.3	95.4	99.2	(1/)	98.2	97.6	97.8	(1/)	100.5	97.3
Skirts, rayon	Dec 52	101.1	99.2	101.3	100.3	99.9	96.7	98.8	100.8	95.7	96.3	93.0	93.2
Blouses	Dec 52	95.6	93.6	91.4	93.0	93.0	92.4	91.8	93.2	91.8	91.4	92.5	93.9
Children's:													
Boys' slacks	Dec 52	97.8	98.0	98.5	95.7	95.8	95.8	96.8	96.8	96.0	96.2	96.0	94.2
Boys' jackets	Dec 52	(1/)	(1/)	88.9	84.9	(1/)	(1/)	86.0	84.5	(1/)	(1/)	84.5	88.6
Girls' sweaters, orlon	Dec 52	(1/)	(1/)	89.5	89.2	(1/)	(1/)	85.4	85.0	(1/)	(1/)	82.6	80.9
Other manmade fibers apparel:													
Yard goods, rayon		69.4	69.1	69.6	70.0	70.0	68.9	70.2	70.2	71.1	70.0	70.7	70.6
Miscellaneous apparel	Dec 52	96.3	95.8	96.4	96.4	96.5	96.1	97.7	97.1	96.2	96.3	96.7	97.2
Women's coats, fur		(1/)	(1/)	74.1	74.0	(1/)	(1/)	73.9	72.6	(1/)	(1/)	71.0	71.3
Women's girdles		130.9	130.9	130.9	130.9	132.2	132.2	133.7	133.7	134.0	134.0	134.5	135.3
Shoes		121.7	123.4	126.0	126.5	127.3	127.6	127.9	128.5	129.1	129.5	129.7	130.0
Men's:													
Shoes, street		125.3	127.5	129.1	129.4	129.9	130.3	130.8	131.5	130.1	129.5	128.6	128.5
Shoes, work		120.0	121.3	127.0	127.6	128.2	129.0	128.5	128.5	129.3	129.9	129.5	130.2
Women's:													
Shoes, street		116.8	118.1	121.1	121.7	122.9	123.2	123.5	124.5	125.8	126.3	126.7	128.0
Shoes, play	Dec 52	105.6	106.8	108.9	109.9	111.1	111.0	111.9	111.6	110.7	112.6	112.7	113.2
Children's:													

Children's:													
Shoes, oxford		126.6	128.3	130.3	130.5	131.0	130.9	131.1	132.0	134.3	134.6	135.8	135.2
Shoe repairs		115.7	116.1	117.3	119.2	123.7	125.6	126.8	129.8	130.0	132.0	133.5	133.7
Transportation		126.7	126.8	128.6	133.1	135.1	135.3	135.9	138.9	138.7	138.9	141.3	144.3
Private		116.8	116.7	118.7	123.3	125.2	125.4	125.5	128.6	128.0	128.0	130.4	133.3
Automobiles, new		121.8	120.1	118.5	132.6	130.1	128.1	125.0	135.2	132.4	130.8	130.1	143.6
Automobiles, used	Jan 53	68.7	70.4	74.4	76.1	79.1	81.0	83.4	82.3	79.4	81.7	88.4	89.6
Tires		129.5	122.1	129.7	130.9	127.5	125.4	131.8	133.6	133.2	131.1	134.8	138.8
Gasoline		124.4	125.6	129.6	128.8	132.9	132.7	131.2	131.5	129.5	129.2	131.9	126.7
Motor oil		113.9	114.3	114.9	118.2	123.7	125.0	124.7	125.1	126.3	126.3	125.9	126.4
Auto repairs		133.3	134.2	135.9	137.5	138.1	139.6	140.4	142.4	141.3	141.6	142.1	142.6
Auto registration		120.5	121.0	121.4	121.4	123.5	123.6	123.7	123.6	126.3	127.5	127.6	127.6
Auto insurance		138.3	137.9	137.7	137.8	146.3	148.5	153.0	155.9	171.8	171.8	173.2	173.0
Public		170.8	172.6	173.0	174.1	175.8	176.8	181.1	182.4	185.9	187.7	189.8	191.8
Transit fares		183.9	184.0	184.6	186.0	186.0	187.5	193.2	194.8	198.3	200.7	203.5	205.0
Railroad fares, coach		117.5	123.7	123.7	123.7	129.7	129.7	129.7	129.7	132.9	132.9	132.9	136.1
Medical care		131.4	132.0	134.0	134.7	136.4	137.9	139.0	140.8	142.3	144.2	146.5	147.6
Medical care less hospital rates and group hospitalization		121.2	121.6	122.5	123.1	124.9	125.9	126.3	127.7	128.9	129.7	130.2	131.1
Physicians' fees		126.3	126.9	127.9	128.0	132.3	132.5	132.8	134.8	136.0	137.0	137.5	138.6
General practitioners' fees		127.8	128.3	129.3	129.4	134.4	134.4	134.6	136.9	138.3	139.4	139.9	141.1
Office visit		127.0	127.2	127.5	127.5	131.2	131.4	131.7	133.3	134.9	136.5	137.1	138.3
House visit		124.4	124.9	126.5	126.5	133.5	132.9	133.1	136.3	137.5	138.3	138.3	139.6
Obstetrical care		142.4	144.1	146.6	147.0	148.4	150.2	150.4	151.6	152.8	152.8	155.1	156.0
Surgeons' fees		117.3	118.1	118.7	119.6	119.9	120.9	121.6	121.9	122.3	122.6	122.9	123.5
Appendectomy		116.6	117.8	118.1	119.1	119.6	119.6	119.8	119.3	120.0	120.0	120.2	120.7
Tonsillectomy		119.4	119.4	120.4	121.2	121.0	124.2	125.7	127.8	127.3	128.4	128.7	129.7
Dentists' fees		124.4	124.3	124.5	125.4	126.6	127.4	128.0	128.6	130.2	131.3	132.5	133.3
Fillings		123.7	123.4	123.7	124.6	125.7	126.7	127.2	127.8	129.6	130.6	132.0	132.7
Extractions		127.8	128.8	128.3	129.6	131.0	131.5	132.1	132.9	133.5	135.3	135.6	136.9
Optometric examination and eyeglasses		109.9	110.9	112.1	112.9	115.4	116.2	115.5	116.1	116.5	116.8	116.8	116.7
Hospital rates		169.6	171.2	176.7	180.1	183.6	185.4	191.0	193.5	196.4	197.6	199.3	201.1
Men's pay ward		179.7	181.0	186.5	193.3	198.0	199.6	206.3	211.4	214.5	215.1	216.4	219.0
Semiprivate room		165.8	168.2	174.4	176.1	179.3	180.9	187.2	188.9	191.8	193.2	194.9	196.5
Private room		161.6	162.8	167.2	168.8	171.3	173.4	177.3	177.9	180.6	182.2	184.1	185.3

See footnotes at end of table.

Table 12. Consumer Price Index--United States city average: Indexes of selected items and groups, quarterly, 1947-58 (Cont'd)

(1947-49=100 unless otherwise specified)

Item and group	Other index bases	1956				1957				1958			
		Mar.	June	Sept.	Dec.	Mar.	June	Sept.	Dec.	Mar.	June	Sept.	Dec.
Medical Care--Continued													
Group hospitalization	Dec 52	120.3	120.9	125.7	126.3	126.7	129.2	132.0	134.6	136.8	140.1	147.5	149.1
Prescriptions and drugs		113.5	113.3	114.1	114.4	115.2	117.0	117.2	119.0	120.2	120.8	121.2	121.4
Prescriptions		120.6	119.9	121.9	122.3	123.0	125.3	125.7	127.9	129.9	130.9	131.3	131.8
Aspirin tablets		100.7	100.7	100.8	100.8	101.3	101.9	101.9	105.9	107.5	107.9	108.6	108.9
Milk of magnesia		123.0	123.1	123.1	123.4	127.7	135.4	136.1	136.1	136.2	136.3	136.3	136.3
Multiple vitamin concentrate	Dec 52	101.3	101.4	101.4	101.4	101.7	101.7	101.6	101.3	101.0	101.2	101.2	101.2
Personal care		119.2	119.9	120.5	121.8	122.9	124.2	125.1	127.0	128.3	128.6	128.7	129.0
Men's haircuts		150.0	150.0	151.1	153.5	156.3	160.4	161.3	162.0	162.0	162.0	163.6	163.6
Beauty shop services		112.9	114.1	115.3	117.5	118.4	119.3	119.3	121.3	124.1	124.5	124.4	124.4
Shampoo and wave set		122.3	124.3	126.3	129.7	131.3	132.3	133.0	136.1	140.7	141.1	141.2	141.2
Permanent wave		99.3	99.2	99.4	99.9	99.9	100.5	99.8	100.2	100.3	100.7	100.4	100.3
Toilet goods		105.5	105.8	105.9	107.0	108.1	108.9	109.5	111.7	113.3	113.8	113.5	113.3
Toothpaste		110.3	110.9	110.5	111.0	111.3	111.3	112.2	119.8	119.9	120.0	120.1	119.9
Face powder		121.1	121.6	121.6	124.6	125.2	125.2	125.4	125.5	125.5	125.5	125.5	125.5
Toilet soap		89.7	90.1	91.1	91.6	92.5	95.6	96.7	99.7	100.6	101.4	101.2	101.7
Razor blades		103.3	103.4	103.2	103.2	103.2	103.2	103.2	103.0	103.0	103.0	103.0	102.8
Sanitary napkins		126.4	126.4	126.5	136.8	140.3	140.3	141.6	144.7	145.4	146.4	146.3	146.0
Cleansing tissue	Dec 52	86.4	85.7	85.1	86.1	86.0	86.0	86.3	86.6	86.9	87.0	86.8	86.8
Shaving cream	Dec 52	108.5	108.3	108.3	108.5	108.6	108.7	108.6	109.7	109.8	109.9	110.5	110.3
Face cream	Dec 52	97.5	97.6	97.6	98.1	104.5	105.4	106.0	106.9	117.5	121.1	121.7	121.9
Shampoo	Dec 52	100.8	100.3	101.2	101.2	101.2	102.5	102.4	102.4	103.1	102.7	99.3	97.6
Home permanent refill	Dec 52	136.2	139.0	139.6	139.5	139.5	139.5	140.5	141.7	142.2	143.0	142.6	141.5
Reading and recreation		107.7	107.6	108.4	109.3	110.5	111.8	113.3	114.6	117.0	116.7	116.6	116.9
Motion-picture admissions		123.6	125.1	124.9	126.8	129.0	129.8	131.2	134.5	137.8	136.0	134.8	134.1
Adults		126.3	127.8	127.2	129.1	131.1	131.4	133.0	135.9	139.7	136.7	135.7	135.0
Children		109.3	110.6	111.9	113.9	116.5	119.0	119.8	124.2	126.0	128.3	126.4	125.8
Newspapers		123.7	123.7	124.7	124.7	125.6	138.7	141.7	144.2	144.2	145.3	144.8	145.0
Television sets	Dec 52	85.9	85.5	87.3	89.0	89.2	90.1	90.2	93.3	92.2	90.1	92.6	93.1
Radios, table	Dec 52	89.8	88.9	87.7	87.4	88.2	90.9	92.0	92.3	89.2	88.2	86.7	87.7
Toys	Dec 52	95.3	93.5	95.1	95.1	97.5	91.7	95.6	95.7	96.9	96.9	96.8	95.4
Sporting goods	Dec 52	90.7	89.4	90.5	90.5	92.8	91.1	92.0	91.6	98.0	98.0	96.5	96.5
Television repairs	Dec 52	122.1	122.4	123.1	125.2	126.3	128.5	129.2	133.3	133.6	136.8	136.9	137.8

Other goods and services		121.2	121.8	122.7	123.3	124.2	124.6	126.7	126.8	127.2	127.2	127.1	127.3
Tobacco products		123.2	124.1	124.6	124.5	124.7	125.3	130.5	130.8	131.1	131.2	131.4	131.7
Cigars		110.0	109.9	109.9	109.0	109.3	109.5	109.7	109.7	109.7	109.7	109.7	109.7
Cigarettes		125.1	126.1	126.6	126.7	126.8	127.5	133.1	133.4	133.8	133.9	134.1	134.5
Alcoholic beverages	Dec 52	103.2	103.7	104.6	105.6	107.0	106.8	107.1	107.0	107.0	106.8	106.5	106.8
Beer	Dec 52	104.2	105.0	106.4	107.4	107.8	107.5	107.6	107.6	107.5	107.4	107.2	107.4
Whisky	Dec 52	101.8	101.9	102.0	102.9	105.8	106.0	106.4	106.3	106.3	105.9	105.7	105.8

1/ Also includes radios and television sets, shown separately under reading and recreation.
4/ Not available.

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The GNP implicit price deflators for personal consumption are also presented. Annual deflators have been changed from a 1954 base to a 1947–49 base to facilitate comparison with the CPI. (See table 13.)

TABLE 13.—*Implicit price deflators—Personal consumption expenditures*

[Index: 1947–49=100]

	1947	1948	1949	1950	1951	1952	1953	1954	1955	1956	1957	1958
Total personal consumption expenditures	97	102	101	103	110	112	113	114	115	117	120	122
Durable goods	97	101	102	103	110	112	109	109	109	111	115	115
Automobile and parts	94	101	105	105	111	116	114	112	114	117	123	125
Other	98	101	101	103	111	109	106	108	107	107	110	110
Nondurable goods	97	103	100	100	109	110	109	110	109	111	114	116
Food and beverages	98	103	99	100	110	112	110	110	109	109	113	117
Clothing and shoes	97	103	99	98	107	105	105	105	105	107	108	108
Gasoline and oil	92	103	105	105	108	110	114	117	118	122	127	126
Other	96	103	102	103	109	110	112	112	113	115	119	121
Services	95	101	104	106	111	116	121	124	126	129	133	135
Housing	95	101	104	107	112	113	122	126	127	129	132	134
Household operation	98	100	102	104	107	111	114	115	115	116	118	120
Transportation	93	101	106	110	115	120	128	131	133	137	139	144
Other	95	102	103	105	111	116	121	124	127	131	137	140

NOTE.—1954 constant dollar deflators transformed to 1947–49 reference base.

Source: "U.S. Income and Output," table VII–13.

IV. WAGES AND INCOMES

The service sector is, on the average, a low wage and income sector. In contrast to the increase in relative importance scored by the sector in terms of output, employment, and price increases, incomes have not, in general, kept up relative to the manufacturing sector.

There are exceptions. Wage and salary workers in transportation industries, in some financial positions, and in radio and television had high annual incomes compared with other service workers.

Table 14 presents the average annual earnings of wage or salary employees in the service sector in 1947 and 1958 plus the percentage increase attained between the 2 years. The data are for full-time equivalent employees. This allows valid comparison between industries with differing proportions of part-time workers.

TABLE 14—*Service sector: Average annual earnings per full-time wage or salary worker*

	1947	1958	Percent increase
Finance, insurance and real estate	$2,740	$4,484	63.6
Banking	2,800	4,433	55.0
Security and commodity brokers	4,714	7,867	66.9
Finance	3,412	5,313	55.7
Insurance carriers	2,811	4,515	60.6
Insurance agents and combination offices	3,103	5,018	61.7
Real estate	2,052	3,347	63.1
Transportation	3,145	5,488	74.5
Railroads	3,216	5,803	80.4
Local and highway transportation	2,833	4,035	42.4
Local rail and bus	2,965	4,726	59.4
Highway passenger transportation	2,707	3,634	34.2
Highway freight transportation	3,063	5,468	78.5
Water transportation	3,748	6,463	72.4
Air transportation	3,265	6,104	86.9
Pipeline transportation	3,750	6,360	69.6
Services allied to transportation	2,762	4,944	79.0
Communications and public utilities	2,792	5,059	81.2
Telephone, telegraph and related	2,583	4,528	75.3
Radio broadcasting and television	4,073	7,038	72.8
Utilities: Electric and gas	2,994	5,549	85.3
Local utilities and public services	2,217	3,880	75.0
Services industries	2,005	3,262	62.7
Hotels and lodging	1,924	2,779	44.4
Personal care services	1,978	3,081	55.8
Private households	1,463	2,131	45.7
Commercial, trade schools, etc	2,903	4,209	45.0
Business services	3,023	5,022	66.1
Miscellaneous repair service and hand trades	2,974	4,572	53.7
Motion pictures	3,031	4,209	38.9
Amusement and recreation	2,345	4,206	79.4
Medical and other health services	1,821	2,751	51.1
Legal services	1,971	3,940	99.9
Engineering and other professionals services	3,495	6,302	80.3
Educational services	2,113	3,457	63.6
Nonprofit membership associations	2,172	3,669	68.9

Both the relatively low level and the deterioration of relative income status of service wage or salary workers is illustrated by table 15.

TABLE 15.—*Relative average annual earnings of wage or salary workers, service sector, 1947–58*

Industry	1947	1948	1949	1950	1951	1952	1953	1954	1955	1956	1957	1958
Finance, insurance, real-estate	0.98	0.97	0.98	0.98	0.93	0.92	0.91	0.93	0.91	0.90	0.90	0.91
Railroads	1.15	1.19	1.20	1.15	1.16	1.13	1.09	1.10	1.08	1.11	1.13	1.18
Local railroads and bus	1.06	1.04	1.06	1.02	1.01	1.00	.98	.99	.97	.96	.94	.96
Highway freight	1.10	1.10	1.15	1.16	1.09	1.10	1.12	1.13	1.12	1.11	1.10	1.11
Air transportation	1.17	1.21	1.25	1.24	1.22	1.23	1.22	1.25	1.23	1.20	1.20	1.24
Telephone and telegraph	.93	.91	.94	.92	.89	.90	.90	.93	.93	.91	.91	.92
Utilities: Electric and gas	1.07	1.06	1.09	1.08	1.07	1.08	1.09	1.11	1.09	1.09	1.10	1.12
Hotels	.69	.67	.68	.65	.62	.61	.59	.61	.59	.57	.57	.56
Personal service	.71	.69	.70	.67	.64	.63	.63	.64	.63	.62	.62	.62
Private households	.52	.49	.49	.46	.44	.45	.46	.46	.43	.43	.43	.43
Miscellaneous repair	1.07	1.04	1.05	1.04	1.00	.99	.98	.98	.95	.95	.94	.93
Motion picture	1.09	.96	.94	.88	.85	.84	.81	.84	.86	.85	.85	.85
Medical services	.65	.63	.65	.63	.59	.59	.58	.59	.57	.55	.55	.56
Legal services	.71	.72	.74	.72	.69	.72	.73	.75	.76	.78	.79	.80

NOTE.—Average annual earnings in service industry divided by average annual earnings in all manufacturing. Detail is not exhaustive of entire sector.

Source: Data from "U.S. Income and Output" table VI-15.

The transportation, communication, and public utility industries included in the sector are relatively high paid industries and have been able to maintain and, in

some cases, improve their standing vis-a-vis manufacturing. Most of the other service industries experienced declines in relative annual incomes. This decline took place despite the increase in service employment.

The unincorporated form of business organization is particularly important in the service sector. Not only are there many small service establishments in the drycleaning, laundry, barber and beauty shop industries, but also many professional services are provided by individuals or partnerships.

The Department of Commerce gives an aggregate estimate of income for unincorporated firms in service sector industries, but not more detail. Their estimate of the increase in incomes of active proprietors of unincorporated firms is 58.2 percent over the period 1947–53 and 5 percent 1953–58.[8] The Internal Revenue Service occasionally supplements its regular "Statistics of Income" series by publishing partnership income data on an industry basis. Information is available for 1947–48 and 1953–54, plus preliminary data for 1957–58. Tabulated below in table 16 is the ordinary income per partnership for each of the 3 years.[9]

TABLE 16.—*Service sector: Partnership income selected years, 1947–58*

	1947	1953	1958	Percentage change	
				1947–53	1953–58
All industries	$8,639	$8,757	$9,823	1.4	12.2
Total agriculture, forestry, fisheries	6,092	3,380	5,721	−44.6	69.3
Total construction	9,551	11,629	11,809	21.7	1.5
Total manufacturing	12,722	14,801	13,562	16.3	−8.4
Trade total	8,688	8,518	8,219	−1.9	−3.5
Wholesale	16,906	15,705	14,654	−7.1	−6.7
Retail	7,149	7,305	6,906	2.2	−5.5
Total finance, real estate	6,354	7,235	6,262	13.9	−13.5
Total services	10,285	14,073	16,121	36.8	14.5
Hotels	5,675	3,141	3,028	−44.7	−3.6
Total personal services:					
Laundry	5,695	7,807	6,806	37.6	−12.8
Photo studio	4,021	5,620	5,759	39.8	2.5
Barber and beauty	3,304	4,832	4,693	46.2	−2.9
Funeral	10,428	9,393	14,147	−9.9	50.6
Other	3,625	3,176	5,119	−12.4	64.6
Business services	6,322	15,766	15,905	141.7	.9
Auto repair	4,262	5,888	5,579	37.5	−5.3
Miscellaneous repair	5,174	6,830	7,262	32.0	6.3
Total amusement	7,991	5,046	3,049	36.9	−39.6
Motion pictures	16,308	8,453	3,898	−48.2	−53.9
Medical total	27,178	39,610	43,077	45.7	8.7
Physicians and surgeons	38,184	47,157	53,033	23.5	12.5
Dentists	14,446	21,046	25,893	45.7	23.0
Other	21,426	37,386	35,263	74.4	−5.7
Legal services	28,994	32,624	47,736	12.5	46.3
Educational	7,132	7,007	12,906	−1.8	84.2
Engineering and architectural	19,370	33,803	32,482	74.5	−3.9

Source: "Partnership Income, 1947" Treasury press release No. S–2645, Wednesday, Apr. 4, 1951; "Partnership Returns," statistics of income, 1955, IRS publication No. 369; "Selected Financial Data," statistics of income, 1957–58 (April 1959).

PART 2: PRICES, INCOME, EMPLOYMENT IN SERVICE SECTOR COMPONENTS

The foregoing sections have discussed output, employment, prices, and incomes in the service sector on an aggregate basis. In this section, a more detailed examination will be made of some of the individual components of the sector.

I. MEDICAL CARE SERVICES

A. PRICES AND EXPENDITURE

The Consumer Price Index for services related to medical, dental, optical, and hospital care increased nearly 60 percent from 1947 to 1958. However, professional services prices increased much less than hospital prices, 35 percent as contrasted to 125 percent. Table 17 contains the items in the medical care price index.

[8] Data from "U.S. Income and Output," table VI–4 and VI–2.

[9] Income per partner would be a preferable statistic, but the 1958 preliminary data do not include enough information to make that computation. Income per partnership will not be comparable between years if the average number of partners per firm changes.

TABLE 17.—*Medical service prices, 1947–58*

Item	Relative importance, December 1952	Price index		Percent increase	Average annual rate of increase		
		1947	1958		1947–58	1947–53	1953–58
Medical services	4.2	94.5	149.2	57.9	4.2	4.6	3.8
General practitioner fees	1.6	96.9	139.3	43.7	3.4	3.1	2.1
Surgeon fees	.3	96.2	122.7	27.2	2.2	2.8	1.5
Dentist fees	.8	95.2	131.4	38.0	3.0	3.5	2.3
Optometrist	.3	96.2	116.7	21.3	1.8	2.2	1.3
Hospital room rates	.2	87.4	198.0	126.5	7.7	9.2	6.0
Group hospitalization	1.0	[1] 85.6	142.2	[2] 35.7	----------	----------	6.3
Professional service plus drugs [3]	3.9	96.3	129.7	34.7	2.7	2.9	2.6
Medical care [4]	5.1	94.9	144.6	52.4	3.9	4.2	3.6
All items	100.0	95.5	123.5	29.3	2.3	3.1	1.5
Service less shelter	16.7	94.7	143.8	51.8	3.8	4.7	2.8

[1] Index for 1953 annual average; item first included in index December 1950. Base: December 1952=100.
[2] Percent change 1953 to 1958.
[3] Medical services less hospital rates and group hospitalization.
[4] Includes drugs and prescriptions in addition to the services detailed above.

Source: BLS, Consumer Price Index.

Table 18 presents the record of consumer expenditures for medical care.

TABLE 18.—*Current dollar consumer expenditure for medical care, 1947–58*

	Percent increase	
	Aggregate expenditures	Per capita expenditures
Total medical care	125.4	86.5
Physicians	93.1	59.9
Dentists	113.5	76.8
Hospital care	209.2	156.0
Health insurance	165.0	119.4

Source: Data from "U.S. Income and Output," table I–4.

B. HOSPITAL CARE

The price-setting mechanism in hospitals is probably more nearly a cost-based system than it is a system of demand oriented profit maximization.[10] Few private, nonprofit, voluntary hospitals make a surplus on current operation; fewer still cover depreciation. Most are, at best, pleased to cover out-of-pocket costs.

The major cost item is personnel. On a per-patient-day basis, payroll costs accounted for 60.8 percent of total costs in 1958, for 60.7 percent in 1954, and 54 percent in 1947.[11] About two-thirds of the employees of hospitals are in nonprofessional, nontechnical grade occupations.[12]

Employment costs have risen tremendously since 1947. The table below shows the increase in employment and payroll costs for all private, general and special short-term hospitals in the United States.

TABLE 19.—*Increase in employment and costs, private short-term hospitals, 1947–58*

	Percentage
Total expense per patient-day	154.0
Payroll per patient-day	186.0
Full-time equivalent employees, number	82.7
Full-time equivalent employees, per patient-day	44.4

Source: "Hospitals," the Journal of the American Hospital Association, XXVII, pt. 2, p. 23 (June 1953) and XXXIII, pt. 2, p. 384 (August 1959).

[10] See pt. 3 below. Multiple regression analysis suggests a significant association between the level of unskilled wages and the level of hospital rates.
[11] See sources cited in table 19.
[12] Ray E. Brown, "The nature of hospital costs," reprint from "Hospitals," the Journal of the American Hospital Association, Apr. 1, 1956. Brown, does, however, mention a trend toward more professionalism among technicians. The following section draws heavily on his article.

Other factors tending to increase hospital costs cited by Brown are also important.

One factor is the nature of hospital costs. The major portion of hospital operations costs are not variable. A hospital is typically fully staffed, at all times ready for a peak load. Therefore, the occupancy rate is a critical factor in average operating cost per bed. In studies cited by Brown, it is shown that in a group of otherwise similar hospitals, those which had a better-than-average occupancy rate had less than half the unrecovered overhead cost per bed than did those hospitals whose occupancy rates were lower than average.

While desirable on other grounds, the tendency toward shorter stays makes syncronization of patient discharge and admissions more difficult; this leads to empty, nonrevenue-producing beds. Again, the population pattern of the United States is best served by an extensive system of smaller hospitals to supplement those in metropolitan centers. Occupancy rates are lower on the average in small hospitals than in large.[13] Their costs per bed are therefore higher.

A second factor is the increase in number of special diagnostic and therapeutic services provided by hospitals. Brown, quoting from the report of the Commission on Financing Hospital Care, offers this statement, "The relationship between the level of per diem expense and the scope of hospital service was apparent when per diem expense was determined for groups of hospitals classified by number of selected services they offered. * * *" [14]

C. PROFESSIONAL SERVICES

Income and employment data with respect to medical practitioners is not easily available. Roberts [15] brings together data on the number of active practicing physicians, dentists, and professional nurses. The table below compares his data with Department of Commerce data on number of persons participating (including active proprietors of unincorporated enterprises) in medical and other health services. The declining proportion of professional personnel in the total illustrates the growing importance of nonprofessional technical and other lesser skilled personnel.

TABLE 20.—*Employment in medical services*

Year	Active physicians, dentists, and nurses	Persons engaged in medical and other health services	Physicians, dentists, and nurses as a percent of total
	Thousands	*Thousands*	
1930	439.2	749	58.6
1940	529.3	841	62.9
1950	667.8	1,237	54.0
1953	706.2	1,413	50.0
1955	745.6	1,551	48.0

Sources: Roberts, "Trends in the Supply and Demand of Medical Care," table 8, p. 70; "U.S. Income and Output," table VI-16 and "National Income," table 28.

Income data for physicians and dentists is not regularly published. The Survey of Current Business has conducted surveys of professional income, but none have been published for recent years.[16] Partnership income data has been published by the Internal Revenue Service for the years 1947–48, 1953–54, and for 1957–58, preliminary data. See table 16 above.

These data cannot safely be regarded as representative of average earnings for individual doctors for two reasons:

(1) Data tabulated is for the partnership; if the average number of partners per partnership is not the same in each year, the results will not be strictly comparable between years on a per person basis.

(2) Many doctors, dentists, and other practioners are not members of partnerships. Sole proprietors and salaried medical practitioners experience different earnings records.[17]

[13] Brown, op. cit. says, "During 1954 those hospitals with less than 25 beds averaged 51.6 percent occupancy while those with over 300 beds averaged 71.8 percent occupancy."

[14] Ibid.

[15] Markly Roberts, "Trends in the Supply and Demand of Medical Care," Study Paper 5 in the "Study of Employment, Growth and Price Levels" (1959).

[16] See William Weinfeld "Income of Dentists, 1929–48" Survey of Current Business, January 1950; "Income of Physicians, 1929–49," ibid, July 1951; "Income of Lawyers in the Postwar Period," ibid, December 1956.

[17] Ibid.

II. Transportation Services and Public Utilities

A. PRICES AND EXPENDITURES

Prices in the transportation services group experienced a greater percentage increase than any other service group in the Consumer Price Index from 1947 to 1958. Local transit fares increased 126.4 percent and led the other items by a wide margin. In fact this item which accounts for 27 percent of the weight of the transportation services index, contributed 40.5 percent of the rise. (See table 21.) The utilities rose much less, in general.

TABLE 21.—*Transportation service prices, 1947–58*

	Relative importance, December 1952	Price index		Percent increase	Average annual rate of change		
		1947	1958		1947–58	1947–53	1953–58
Transportation services	3.7	89.3	174.1	95.0	6.3	9.1	3.4
Auto repairs	1.1	95.5	141.9	48.6	3.7	4.3	3.0
Insurance	1.0	85.0	171.0	101.2	6.6	9.8	2.8
Registration fees	.3	97.9	126.9	29.6	2.4	1.3	3.5
Bus and transit fares	1.0	88.8	201.0	126.4	7.7	9.9	5.2
Railroad fares	.3	89.7	133.2	48.5	3.7	5.4	1.9
Transportation total [1]	11.3	90.6	140.5	55.1	4.1	6.2	1.6
Gas and electricity	1.9	97.6	117.0	19.9	1.7	1.1	1.9
Telephone	1.1	95.3	127.4	33.7	2.7	4.4	.7
Postage	.2	97.4	139.9	37.5	2.9	3.6	2.1
Water	.3	[2] 101.3	136.4	34.6	----	----	6.1

[1] Includes in addition to the services shown in detail above, new and used autos, tires, gasoline and motor oil.

[2] Index for 1953 annual average. Item was first included in index January 1953. Base: December 1952=100.

Source: BLS, Consumer Price Index.

Consumers' expenditures for transportation services and utilities show divergent trends. Expenditures associated with the operation of private automobiles increased much more than did expenditures for public transportation. Intercity rail transportation suffered the greatest decrease, despite fare increases measured by the Consumer Price Index of nearly 50 percent. The utilities experienced very large increases in expenditure with comparatively little price runup. Tabulated below is the percentage changes in consumer expenditures for various transportation services in the period 1947–58.

TABLE 22.—*Expenditures for transportation services, percentage change, 1947–58*

Item	Percent change in expenditures	
	Aggregate	Per capita
Automobile repair and maintenance	132.6	76.6
Bridge, highway, and ferry tolls	233.3	175.0
Auto insurance: premiums less claims	278.2	213.6
Local transit, taxi, and communtation	−5.8	−22.0
Intercity transportation:		
Railroad	−38.7	−49.4
Bus	−9.3	−25.1
Airline	410.0	324.1
Household utilities:		
Electricity	196.5	145.1
Gas	206.0	153.5
Water	121.7	83.5
Telephone and other communication	175.2	128.1

Source: Data from "U.S. Income and Output," table II–4.

B. PUBLIC TRANSPORTATION

The public transportation industries, expecially local transportation and rail passenger service, have suffered extensive declines in patronage.

A drop in volume and revenue has severe repercussions on unit profits. A vicious circle can easily be set in motion. Higher rates, or an exogenous change in taste, leading to a drop in volume, decreases revenue. Costs are unlikely to drop as much as revenue because carriers are required to maintain service and because of the heavy fixed cost elements in transportation industry cost structures. Returns on assets or operations decline. Consequently, the carrier is eligible for a further rate increase in order to restore profits to a satisfactory level. If the same cycle repeats, repeated rate increases may take place with little improvement in earnings.

Employment in both intercity railroads and local transit has been declining. At the same time hourly wage rates and average annual earnings have been rising. Average hourly earnings rose 87.7 percent and 73.8 percent, respectively, in the class I railroads and the local transit industries. Employment, however, decreased 36.6 percent and 47.9 percent. Railway workers maintained and improved slightly their annual income position relative to workers in manufacturing industries; transit employees slipped somewhat. (See table 23 and 24.)

TABLE 23.—*Employment: transportation and public utility services, 1947–58*

[In thousands]

	Local transit	Class I railroad	Telephone	Gas and electric utilities		Local transit	Class I railroad	Telephone	Gas and electric utilities
1947	185	.....	585.5	.....	1954	126	1,065	698.8	557.1
1948	163	1,327	638.9	498.0	1955	116	1,057	706.7	562.1
1949	156	1,191	638.9	514.9	1956	110	[1] 1,043	751.2	569.1
1950	145	1,221	619.5	526.0	1957	104	[1] 985	768.2	577.2
1951	139	1,276	644.0	533.3	1958	96	[1] 841	732.4	578.5
1952	133	1,226	678.4	543.3					
1953	129	1,207	702.2	554.2	Percent change...	−47.9	[2] −36.6	25.1	[2] 41.8

[1] Data for road with annual revenue above $3,000,000 before, above $1,000,000.
[2] Percentage change, 1948–58.

Source: BLS, "Employment and Earnings."

TABLE 24.—*Average hourly earnings: Transportation and public utility services, 1947–58*

Year	Class I railways	Local transit	Gas and electric utilities	Telephone	Year	Class I railways	Local transit	Gas and electric utilities	Telephone
1947	.....	$1.22	.....	$1.20	1954	$1.93	$1.81	$2.02	$1.76
1948	$1.30	1.33	$1.45	1.25	1955	1.96	1.87	2.10	1.82
1949	1.43	1.43	1.54	1.35	1956	2.12	1.96	2.22	1.86
1950	1.57	1.49	1.60	1.40	1957	2.26	2.05	2.33	1.95
1951	1.73	1.56	1.51	1.49	1958	2.44	2.12	2.46	2.05
1952	1.83	1.65	1.81	1.59					
1953	1.88	1.71	1.94	1.68	Percent change...	[1] 87.7	73.8	[1] 69.6	70.8

[1] Percentage change, 1948–58.

Source: BLS, "Employment and Earnings."

C. PRIVATE TRANSPORTATION

Auto repair prices and automobile insurance rates accounted for just under 50 percent of the rise in transportation service prices. Higher auto repair costs begot higher insurance rates, although independent factors such as higher accident rates impinge upon insurance. The number of automobiles has increased 81.3 percent from 30.7 million in 1947 to 55.7 million in 1957 so that on the average there is now one car for every American family.[18] Furthermore, automobiles are now more complicated machines. An increase in the number and skill of of auto repairmen may be necessary to attain a given level of performance or safety.

[18] "Automobile Facts and Figures," Detroit: Automobile Manufacturing Association, 1958

Employment data for auto service or repair personnel is not published; nor is a regular wage series maintained. However, the Bureau of Labor Statistics has carried out community wage surveys covering auto repair personnel.[19] Table 25 collects data for all the cities and years that are available for auto mechanics. The average rate was computed by weighting the cities according to estimated number of mechanics employed.

TABLE 25.—*Average hourly earnings, auto mechanics, selected years, 1947–58*

	1947	1948	1951	1953	1958
Atlanta	1.35	1.34	1.60	1.98	2.21
Baltimore	1.41	1.42	1.64	1.92	2.40
Boston	1.44	1.50	1.63	1.93	2.37
Cincinnati	1.35	1.55	1.70	(1)	2.42
Chicago	1.67	1.83	2.06	2.51	3.16
Cleveland	1.89	2.15	2.25	2.86	3.12
Detroit	2.05	2.09	2.26	2.78	2.97
Los Angeles	1.87	1.85	2.06	2.48	2.86
Kansas City	1.64	1.70	1.98	(1)	(1)
Minneapolis-St. Paul	1.50	1.50	1.78	(1)	2.71
New York	1.53	1.64	1.87	2.21	2.67
Philadelphia	1.45	1.61	1.69	2.11	2.71
Pittsburgh	1.40	1.56	1.94	1.98	2.72
Portland	1.60	1.73	2.01	2.19	2.52
San Francisco	1.81	2.00	2.03	2.24	2.71
Seattle	1.63	1.80	2.01	(1)	2.54
Washington	1.46	1.48	1.81	(1)	(1)
St. Louis	(1)	2.08	1.93	(1)	2.83
Average wage	1.479	1.745	1.955	2.328	2.761

[1] Not available.

Source: BLS "Community Wage Surveys."

Mechanics received a higher hourly wage than the average for all manufacturing employees in the cities surveyed. There is, however, a significant rank correlation[20] between the manufacturing wage rate and mechanics pay. Those cities with high manufacturing wages also had high mechanics wages. There is also a significant rank correlation[21] between the percentage increase in manufacturing and mechanic wages from 1951–58.

III. Other Nonprofessional Service Industries

Much of the employment in the conglomeration called the service industries is unskilled or at most requires little formal education. Often what training is needed is supplied on the job or through apprenticeship programs. Entry and exit of firms in this industry is relatively easy and small firms abound. This group of service suppliers includes laundry, drycleaning, barber and beauty shops, shoe repair shops, and other establishments which specialize in the care of persons and their belongings. Domestic servants and helpers can also be included as well as appliance and radio-TV repairmen, hotel workers, and similar groups.

A. PRICES

The price changes measured by the Consumer Price Index for items in this group have, on the whole, increased about as much as the average for all services or a little less. However, there are exceptions. The price of men's haircuts and television repairs rose considerably faster than the average of all service prices while beauty shop service, drycleaning, and domestic service rose less than the service index.[22] Laundry prices rose almost exactly as much as the average. See table 26.

[19] These data are published through the regional offices of the Bureau of Labor Statistics. In addition, the National Automobile Dealers Association has begun a program of sampling their membership in order to ascertain data on wages, and pay plans. The first survey was published in the association magazine, NADA, in the June and July 1959 issues.

[20] At the 0.03 level: 11 cities had both types of wage data for both years.

[21] At the 0.01 level: correlation is for 1958, using 16 cities.

[22] Preliminary analysis of the level of dry cleaning prices in a cross section of large cities showed strong association (at 1-percent level) with the level of unskilled wages in those cities. Surprisingly, no such relation appeared with laundry prices, but the partial correlation coefficients of personal care price and the unskilled wages were significantly associated at 5-percent level. For description of data, analysis, and results, see pt. 3.

TABLE 26.—*Other service prices, 1947–58*

Item	Relative importance, December 1952	Price index		Percent increase, 1947–58	Average annual rate of increase		
		1947	1958		1947–58	1947–53	1953–58
Other services [1]	2.7	97.1	129.6	33.5	2.6	2.6	2.7
Personal care [2]	2.0	97.6	128.6	31.8	2.5	2.4	2.7
Man's hair cut	.6	94.3	162.7	72.4	5.1	5.7	4.3
Beauty shop service	.3	100.4	124.1	23.6	1.9	1.0	3.3
Reading and recreation [3]	5.3	95.5	116.7	17.1	1.4	1.3	1.6
Movie admissions	1.4	98.4	135.7	37.9	3.0	1.7	5.2
Television repairs	.1	[4] 105.4	135.9	[5] 24.7			4.5
Laundry services	.8	94.2	142.0	50.7	3.8	4.6	2.9
Drycleaning and pressing	1.2	96.2	128.7	33.8	2.7	3.1	2.1
Domestic service	.6	98.9	134.5	36.0	2.8	3.3	2.3

[1] Includes miscellaneous services (weight 0.8) such as banking, legal, funeral prices, not published separately.
[2] Includes toilet articles in addition to the services detailed.
[3] Includes newspapers, radio and television sets, toys and sports equipment in addition to services detailed.
[4] Index for 1953 annual average; item first included in index in 1953. Base: December 1952.
[5] Percent change 1953 to 1958.

Source: BLS, Consumer Price Index.

B. EXPENDITURES

Consumer expenditures for services in this group have shown diverse trends. While all have increased in absolute amount, on a per capita basis there has been some decline in laundry and such small increases in some others that real consumption has declined. Table 27 lists percentage changes in consumer expenditures on the major items in the group.

TABLE 27.—*Personal consumption expenditures, personal and household services, 1947–58*

[Percentage change]

Item	Change in expenditure	
	Aggregate	Per capita
Drycleaning	38.3	14.5
Laundry	5.1	−12.9
Barber and beauty shops	88.9	56.5
Domestic servants	47.8	22.4
Radio and TV repair	414.4	326.8
Movie admissions	−26.7	−39.3

Source: Data from "U.S. Income and Output," table II–4.

Demand for drycleaning and domestic service was at least strong enough that real output did not decline. Deflated drycleaning expenditures increased 3.4 percent, and domestic service 8.7 percent; laundry output, on the other hand, dropped from 1947–58.[23] Deflated expenditure on domestic services increased only 8.7 percent.

C. EMPLOYMENT AND WAGES

Bureau of Labor Statistics employment and earnings data supplement the data already presented on average number of full- and part-time workers in the industries in this group. Tabulated below is data for employment and hourly earnings in laundry, drycleaning, hotel establishments. Manufacturing wage rates are given for comparison (tables 28 and 29).

[23] Based on aggregate expenditures deflated by the relevant CPI item index.

TABLE 28.—*Employment in unskilled service industries, 1947–58*

[In thousands]

Year	Laundries	Drycleaning	Hotels	Year	Laundries	Drycleaning	Hotels
1947	364.8	153.7	380.0	1954	331.4	162.9	494.2
1948	353.7	151.9	486.0	1955	332.1	163.4	498.7
1949	345.4	152.4	476.0	1956	332.3	165.8	515.4
1950	342.1	156.7	471.0	1957	326.3	169.8	531.0
1951	342.7	165.2	479.7	1958	312.6	167.4	511.3
1952	340.2	166.0	493.3	Percent change	−14.3	8.9	34.5
1953	339.2	166.2	504.3				

Source: BLS, "Employment and Earnings."

TABLE 29.—*Average hourly earnings: Unskilled service industries, 1947–58*

Year	Manufacturing	Laundry	Cleaning	Hotels	Year	Manufacturing	Laundry	Cleaning	Hotels
1947	1.22	.77	.90	.66	1954	1.81	1.00	1.19	.96
1948	1.38	.82	.96	.71	1955	1.88	1.01	1.20	.99
1949	1.47	.84	.99	.74	1956	1.98	1.03	1.26	1.03
1950	1.55	.86	1.01	.77	1957	2.07	1.08	1.30	1.08
1951	1.59	.92	1.06	.82	1958	2.13	1.13	1.32	1.13
1952	1.67	.94	1.10	.87	Percent change	74.6	46.7	46.7	71.2
1953	1.77	.98	1.14	.91					

Source: BLS, "Employment and Earnings."

Data on the incomes of partnerships in this group is tabulated in table 16 above. Income per partnership showed declines from levels achieved in 1953; laundry and drycleaning declined 12.8 percent, barber and beauty shops by 2.9 percent.[24]

PART 3: CITY CROSS SECTION ANALYSIS

I. INTRODUCTION

One approach taken in this study of employment, prices, and wages in the services industries was an analysis based upon a cross section of large cities. Data were collected for a number of economic variables for the period 1951–58. Since average price data is available for most cities only after 1954, some of the analysis was limited to the 4 years, 1955–58.

The rationale upon which the cross section approach was based includes the following considerations:

1. The service sector, perhaps more than in any other sector, is local in nature and orientation. Typically, there are many small firms, often owned and operated by a single individual.

2. Wage rates are not typically set as the result of nationwide bargains between national unions and industrial associations. There are few, if any, regional or national chains, such as there are in retail groceries. Even in those trades which may have guild-type price and wage setting, there is probably little direct coordination between cities.

3. In the professional services where national associations are powerful and where entry is difficult because of training requirements and licensing laws, fee schedules are not uniform in level.

[24] See footnote to table 16 for sources and cautions about the data.

II. The Data

A. CITY SAMPLE

The cities chosen were the 20 large cities for which the Bureau of Labor Statistics (BLS) publishes price data gathered in connection with compilation of the Consumer Price Index. They are listed below:

*Atlanta
*Baltimore
Boston
*Cincinnati
*Chicago
Cleveland
*Detroit
Houston
Kansas City
*Los Angeles
Minneapolis
*New York
Pittsburgh
*Philadelphia
Portland, Oreg.
*St. Louis
*San Francisco
Scranton
Seattle
Washington, D.C.

*Price data available for 1952–58.

B. PRICE DATA

A yearly average price for each of seven services categories was computed and used in this study. A simple arithmetic mean was used to summarize all the price quotations within a category into an annual quotation. There are seven prices for each city for each year.

The following are the categories and the items included:

Laundry service: Semifinished and finished.

Dry cleaning: Man's shirt, delivered and women's dress, cash and carry.

Automobile service: Brake relining and chassis lubrication.

Hospital room rates, per day rate for the following types of accommodation: Men's pay ward, semiprivate room, private room.

Medical service: Office visit to general practitioner, house visit by general practitioner, obstetrical case, appendectomy (surgeon's usual fee excluding anesthetic).

Dental service: Tooth filling amalgam, one surface; tooth extraction without complication, including X-ray.

Personal-care services: Man's haircut; shampoo and wave set, plain, short hair.

Monthly prices are given for the five largest cities; the remaining 15 cities are priced 4 times per year such that five of them are priced each month. All data came from the BLS and can be found in the publications mentioned below.

Data for December 1952 and for 1953–54 is from "Average Retail Prices: Collection and Calculation Techniques and Problems," Bulletin No. 1182 (June 1955). Only the 10 cities marked with asterisks in the list above are reported. Data for the full 20-city sample for 1955 is given in "Average Retail Prices," Bulletin No. 1197 (June 1956). Data for 1956–58 was taken from BLS worksheets in the Division of Prices and Cost of Living and will be published in the future.

C. UNSKILLED WAGE RATES

There are no wage data available for workers in service industries on a city basis. The Bureau of Labor Statistics does, however, publish periodically Bulletins in the series entitled "Occupational Wage Surveys." Data on wages in office, professional, maintenance, and custodial occupations are given for a number of large cities annually (or at times, less regularly) by these publications.

A composite unskilled wage rate was computed for each city and year using data from the "Occupational Wage Survey" series. Six occupations were chosen to be representative of the level of skill typically required in unskilled service industries. The average of the wage paid to workers in these six occupations was then used as an estimate of the level of wages paid in unskilled service industries in the same city and year.

The six occupations chosen were male janitors, female janitors, male laborers (material handling), female packers (shipping), office boys, and female file clerks (class B), all employed in nonmanufacturing industries.

For Washington, D.C., no "Surveys" have been published by BLS. The salary for the lowest civil service grade, transformed to an hourly rate was used

When data for a year was missing, the gap was filled by interpolating between years. If more than 1 year was missing, the movement of manufacturing wages was used as a guide.

Unskilled wage data was interpolated for the following cities and years:

Baltimore: 1953–54, 1956.
Boston: 1958.
Cleveland: 1953, 1955, 1957.
Detroit: 1952, 1954, 1956, 1957.
Minneapolis: 1956.
Portland: 1954.
St. Louis: 1958.
Seattle: 1952–55.

No unskilled wage data at all was available for Cincinnati, Pittsburgh, Houston, Kansas City, and Scranton. These cities were removed from all analyses involving wages.

D. MANUFACTURING WAGES AND INDUSTRIAL EMPLOYMENT

Manufacturing wage rates were supplied by the BLS and are published in its regular periodical, "Employment and Earnings." The May 1954 and May 1959 editions contain annual data which covers the entire period.

Employment is reported for the major nonagricultural divisions: manufacturing, construction, trade, finance, service, government. The manufacturing wage data was not published for the following cities and years: Cincinnati, 1952; Houston, 1952–54; Washington, D.C., 1952–54; Chicago and Cleveland, 1951.

E. LABOR MARKET CONDITION

Major labor markets are classified using a system which takes into account the level of unemployment, the current labor supply and demand situation, expected short-run requirements for labor, and seasonal factors.

Over the period, the classification scale has been changed; however, since this analysis was based on cross-section data only, the noncomparability of the two scales over time is of no importance.

The labor-market condition is reported bimonthly. The Labor Department's ranking scheme was translated into numbers and the arithmetic mean of the 6 bimonthly rankings was used to represent the annual labor-market condition for each city and year.

The data may be found in the periodical "Area Labor Market Trends" (and its predecessor, "The Bimonthly Summary of Labor Market Developments in Major Areas") published by the BLS Bureau of Employment Security.

F. POPULATION

Population estimates were taken from the annual May "Survey of Buying Power" issue of Sale Management Magazine.

G. PRICE LEVEL

Since the Consumer Price Index is a measure of the change in prices in relation to the base period 1947–49, divergences of the index reported for individual cities can show only differential changes in prices. They do not necessarily show differences which may exist in the level of prices among the cities.

To transform the price index from a measure of change only, into a measure of price level, it is necessary to adjust the base-period level to reflect differences in cost among the cities.

In 1946, the BLS conducted a study in which the cost in each city of a standard bill of goods and services (similar in scope to the coverage of the CPI) was determined.

BLS Bulletin No. 927, "Workers' Budgets in the United States: City Families and Single Persons, 1946 and 1947," reports the results of the study. (See table 6, pp. 28–30 of the Bulletin.) The mean cost of the budget in the 20-city sample was computed. The cost of the budget in each of the cities was then converted

into an index with base equal to the average cost of the budget in the 20 cities. The results are tabulated below.

TABLE 30.—*Cost of a standard budget for a family of 4, selected sample of cities, 1946*

[Index numbers]

Atlanta	101. 0	Minneapolis	104. 3
Baltimore	105. 0	New York	105. 8
Boston	106. 7	Philadelphia	100. 6
Chicago	104. 8	Pittsburgh	103. 6
Cincinnati	100. 5	Portland	103. 3
Cleveland	101. 8	St. Louis	106. 0
Detroit	105. 6	San Francisco	107. 1
Houston	95. 0	Scranton	98. 5
Kansas City	97. 7	Seattle	109. 3
Los Angeles	103. 8	Washington, D.C	112. 0

NOTE.—Base is average of cost of budget in all cities.

To this base was added the Consumer Price Index as reported by the BLS for each city and year. The new index shows price change adjusted for differences in price level in the individual cities.

H. NONWHITE POPULATION

Percentage of population which is nonwhite was taken directly from the "Country and City Data Book, 1956" (Bureau of the Census), table 3. The data refer to the year 1950 and were collected in connection with the regular decennial census.

III. PRELIMINARY ANALYSIS

The data described above were used in an attempt to gain understanding of the variables and mechanisms important in price and wage making in the services industries. The results are probably more suggestive than definitive for various reasons mentioned below.

All data in a cross-section should represent simultaneous observations of all variables in all elements of the sample. In the data used here, the observations are considered to be annual averages. But some of the variables are averages of 12 observations; some of 6; some of 4 observations, not all of which refer to the same date in all cities; some, in the case of unskilled wages, are only one observation per year. In years of rapidly changing conditions, the month in which the "representative" observation falls might make important difference in results, especially when all the cities are not surveyed the same month.[24a]

Errors of observation are probably quite high in much of the data used. While the BLS does publish average price data drawn from their price observations for the Consumer Price Index, it must be remembered that main concern of the BLS is with measuring changes in price. If it becomes necessary to alter the sample of establishments surveyed, it makes little difference in the index-making process if, other things equal, the average price differs between the two establishments. As long as successive monthly changes have been the same, the new outlet can be linked smoothly into the index. The average price data may however show an abrupt change.

Combining the labor-market index into an annual average suppresses much of its sensitivity. If it were feasible to collect the rest of the data on a quarterly basis, use of a quarterly labor market condition indicator would be better. Other difficulties include the small number of service occupations for which data were available, as well as the limited number of cities and years included.

Nevertheless preliminary results of what has been found to date are summarized briefly here. Negative results as well as more encourging ones are indicated.

[24a] It is conceivable that something like the following could be true: assume that two cities in fact have the same average wage rate and that in both cities the wage-rate increases in uniform, 2-cent-per-month increments. Now, if the first city were surveyed in January and the second city in December, the second city would show a wage 24 cents higher than the first. Taking simple first difference would not solve the problem because the given city is not always surveyed in the same month each year by BLS. Sometimes the "annual" first difference might span an interval of less than a year, sometimes more.

A. WAGES

The first general hypothesis for investigation was that the industrial composition of the labor force, the labor-market condition, and the price level explain the level of manufacturing or unskilled wages.

Three regressions were run. Two attempted to explain the level of unskilled wages; one of manufacturing wages. The first regressed the level of unskilled wages on the percentage of the total labor force accounted for by employment in the service sector,[25] the labor-market condition (LMC), and the price level.

The second regressed the unskilled wage level on the percentage of total employed in the services industries, the LMC, and the price level. The third regression investigated the association of manufacturing wages on percentage of the total labor force employed in industrial employment, the condition of the labor market and the price level.

The coefficients of multiple determination (R^2) associated with the manufacturing wage regression were significant at the 5-percent level for the years 1956–58, and nearly so in 1955. The beta coefficients associated with the price level were significant at the 5-percent level in 1955 and at the 1 percent level in 1957–58. In addition, in 1957 and 1958 the beta for labor-market condition was significant at the 5-percent level. (See appendix tables.)

On the other hand, the regression of unskilled wages on the variables named above had no coefficients of multiple determination which were significant. The betas associated with labor-market condition and price level were significant at the 5-percent level in 1958 in the regression which included service sector employment as one of the independent variables. The regression involving services industries employment as a variable had no significant betas. (See appendix tables 1 and 2.)

B. SPILLOVER INVESTIGATION

If the level of unskilled wages cannot be satisfactorily explained by employment structure, labor market condition, or price level, another hypothesis is available. That is the "spillover" thesis.

The form investigated here states that the level and change in unskilled wages are associated with the level and change in manufacturing wages more than with other explanatory variables.

The analysis was carried out using rank correlation methods developed by Kendall.[26] The coefficient of rank correlation is called tau by Kendall and will be used throughout as a shorthand expression.

A sample of 14 cities was used, including Atlanta, Baltimore, Boston, Chicago, Cleveland, Detroit, Los Angeles, Minneapolis-St. Paul, New York, Philadelphia, Portland, St. Louis, San Francisco, and Seattle.[27]

Level of unskilled wage on level of manufacturing wage

The results of correlation of cities ranked by level of unskilled wages and level of manufacturing wages were extremely significant. The correlations were carried out using data for the years 1951–58. The size of the sample is 14 cities for each set of computations reported. Cities omitted were Cincinnati, Houston, Kansas City, Pittsburgh, Scranton, and Washington, D.C.

The values of tau and the significance level associated with each one are tabulated below:

Rank correlation coefficients

Year	Value of coefficient	Level at which significant	Year	Value of coefficient	Level at which significant
1951	0.7023	0.0006	1955	0.5889	0.0024
1952	.7079	.0003	1956	.7300	.0001
1953	.6630	.0006	1957	.7889	.0001
1954	.6742	.0006	1958	.6409	.0009

[25] That is, the services industries, finance and insurance, transportation and public utilities.

[26] M. G. Kendall, "Rank Correlation Methods," London: Charles Griffin & Co., 1948. The method set forth by Kendall has the advantage over the simpler Spearman method for small samples. The distribution of tau tends to normality for samples greater than 10 and has been computed for values under 10.

[27] It will be noted that some of these cities have interpolated unskilled wage rates for some years. The first correlation reported below used both interpolated and uninterpolated data. No significant differences arose, so interpolated data was used throughout.

The levels at which the tau coefficients are significant is very high; since rank correlation is a relatively weak method, however, little confidence can be placed in results which are only marginally significant. These results tend to be supported by the simple product moment correlation coefficients which were computed in connection with the wage regressions already mentioned.[28] The simple correlation between unskilled and manufacturing wages is significant at the 1-percent level. Simple correlation between other variables is not significant even at the 5-percent level.

Simple correlation coefficients

	1955	1956	1957	1958
Unskilled wage on—				
Manufacturing wage	[1] 0.8187	[1] 0.8037	[1] 0.7426	[1] 0.7340
Labor market condition	.2241	.3398	.4578	.3711
Price level	.3027	.2720	.3046	.3365
Manufacturing wage on—				
Labor market condition	.1743	.3783	.3768	.4885
Price level	.4910	.5011	.5225	.3365

[1] Significant at 1-percent level.

Percent change of unskilled on percent change in manufacturing

Turning to correlations of cities ranked by percentage change in unskilled wages on percentage change in manufacturing wages, two periods were chosen: 1951–58 and 1954–58.

The values are tabulated:

Year	Tau	Level at which significant
1951–58	0.3626	0.0409
1954–58	.5385	.00453

The connection for 1951–58 was significant at the 4-percent level; tau for the later period was significant at more than the 1-percent level.

The tests carried out above seem to give support to the existence of a spillover between unskilled wages and manufacturing wages in the cities studied.

It might be argued, however, that the strong association of level and rate of change between the two classes of wages is observed because other, third factors operate on both manufacturing and unskilled wages.

The following alternative hypotheses have been tested:

1. The level and rate of change in wages is associated with the state of the labor market within the city.
2. The level and rate of change in wages is associated with the concentration of nonwhite population within the city.
3. The level and rate of change in wages is associated with the level and rate of change in consumer prices within the city.

Wage rates on labor market condition

Cities were ranked by labor market condition and by level of unskilled wages and level of manufacturing wages for the years 1952, 1955, and 1958—years which covered both recession and high employment.

[28] The number of cities included in the computation was 14. Washington, D.C., was included; Cleveland was not. Washington was dropped because the unskilled wage is not strictly comparable with the other cities. Data for Cleveland became available at a later stage in the work.

Values of tau and levels of significance are given below for both unskilled wages and for manufacturing wages:

Year	Unskilled wages		Manufacturing wages	
	Tau	Level at which significant	Tau	Level at which significant
1952	−0.1189	0.3156	0.1453	0.2743
1955	.1695	.1841	.2374	.1292
1958	.0634	.4562	−.0586	.3669

None of the values are high enough that we may, with confidence, reject the null hypothesis, especially in view of the fact that the sign on the correlation coefficient seems to shift from positive to negative with little logic.[29]

Apparently the level and change in wage rates were not importantly associated with labor market condition in the city during this period.[30]

Wage rates on concentration of colored population

Cities were ranked according to the percentage of their population which was found to be non-white in the 1950 Census and by level of unskilled wages.

Results of rank correlation analysis show the following values for tau and significance levels.

Year	Tau	Level at which significant
1951	0.4505	0.015
1955	.2747	.095
1958	.2527	.115

The results are significant for 1951 at 1-percent level, but increasingly less so for the later years. This may reflect two things:

(1) The rank of cities ordered by color concentration may be increasingly unrepresentative of the true order, the further in time one gets from 1950; or

(2) The level of wages may be becoming less sensitive to concentrations of nonwhite population.

Correlating change in unskilled wages on color concentration shows the following values of tau and significance levels. Values for percentage change per hour are shown.

Period: 1951–58:

	Percent change
Tau	0.3406
Level at which significant	.0516

Unskilled wage change measured in percentage terms was somewhat significant at about the 5-percent level.

[29] The significance level was computed from a one-tail distribution on the a priori notion that wages would be positively correlated with labor market condition. Since this did not turn out to be the case, a two-tailed test may be more appropriate. If so, the significance levels should be doubled and the results become, a fortiori, less significant.

[30] But note that of the six cities omitted because of lack of unskilled wage data, two cities, Scranton and Pittsburgh, ranked 20 and 18, respectively, in the cumulative labor market scores. In 1958, Scranton also ranked 20 (i.e., worst) in manufacturing wage level, but Pittsburgh ranked second, behind only Detroit. It seems obvious that the industrial structure—coal versus steel—rather than labor market condition, made the difference.

Some outstanding anomalies can be observed in the ordering of the cities. Boston, New York, and Minneapolis-St. Paul were at the low end of the color concentration and also had low unskilled wage levels.

The low wage levels in Boston and New York can undoubtedly be traced to the foreign immigrants who tend to concentrate at ports of entry. Furthermore, with respect to New York, the unskilled wage rank was worsened during the period. In 1951, New York ranked fourth; in 1955 and 1958 it ranked ninth (small numbers indicate high wages). This experience matches the increased Puerto Rican influx. Boston ranked 10th, 12th, 12th, also showing some deterioration. In the case of Minneapolis, no ready demographic explanation comes to mind. Possibly its relative isolation from other large cities helps keep wage rates low by limiting nearby alternative opportunity.

Price and price levels on wages

Correlations of cities ranked by wages and annual Consumer Price Index reveal:

1. The CPI and the price level have shown stronger association with wage levels as the decade progressed.
2. Manufacturing wages show greater association with the cost of living than do unskilled wages.
3. Using CPI, lagged 1 year, improves the relationship in the case of unskilled wages throughout the period. In the case of manufacturing, lagging wages improved the association in 1954 and 1958, but made it worse in 1951 and 1953.
4. None of the values for tau were as great as they were for the correlation of unskilled wages on manufacturing wages for similar years.

This analysis suggests that both classes of wages appear to be becoming more sensitive to the CPI and price level. Only in 1958 were all correlation coefficients (except one) significant at the 5-percent level. (See tabulated values.)

Year	Unskilled		Manufacturing	
	Tau	Level at which significant	Tau	Level at which significant
CPI on wages:				
1951	0.0324	0.456	0.0738	0.367
1953	.1222	.251	.2778	.087
1954	.0552	.413	.1878	.189
1958	.3445	.045	.3667	.035
CPI lagged 1 year on wages:				
1951	.0782	.371	.0615	.417
1953	.1006	.330	.0559	.413
1954	.1889	.181	.3000	.071
1958	.5058	.008	.5337	.006
Price level on wages:				
1951	.2747	.095	.3333	.0749
1953	.1868	.192	.2307	.138
1958	.3846	.036	.2967	.078

These data tend to support the spillover hypothesis as outlined above. There are some cautions which should be noted in generalizing to the services sector.

(1) The unskilled wage rate is a composite of rates for certain unskilled jobs in nonmanufacturing industries surveyed by the BLS in a number of cities from time to time.

(2) No test has been made of the validity of this unskilled composite rate as a representative of either the level or change in wages in service establishments in the surveyed cities.

(3) Existence of a direct causal mechanism between the levels of manufacturing and unskilled wages has not been proved, only suggested.

C. PRICES

Each of the seven service category prices were regressed on the unskilled wage rate, the labor market condition and the population for each of the four years price data were available.

The results can be summarized as follows:

1. Dry cleaning.—The R^2 was significant at the 5-percent level for every year. The beta coefficients associated with unskilled wages were significant at the 1 percent level in every year.

2. Hospital care.—Significant R^2 values at the 5-percent level were present for all years. The beta coefficients for unskilled wages were significant at the 1-percent level every year. In 1957 and 1958 the betas associated with labor market condition were significant at the 5-percent level and had a negative sign: in these years cities with relatively good labor-market conditions and relatively high hospital rates were associated.

3. Auto repairs.—The R^2 was significant at the 5-percent level in 1958. The beta associated with population was significant at the 5-percent level in 1957 and the 1-percent level in 1958. Larger cities and higher auto repair prices were associated. The betas for unskilled wages and labor-market condition were also significant in 1958.

4. Medical care.—In 1958 the R^2 was just significant at the 5-percent level. The betas for unskilled wage and labor market condition were also just within the 5-percent significance level. As with hospital rates, there was an inverse relation between higher prices and poorer labor-market conditions.

5. Personal care.—None of the R^2 values were significant at the 5-percent level. But the betas associated with unskilled wages were significant at that level each year. No other betas were significant.

6. Dental care.—No R^2 values were significant. There was weak and spotty significance of the betas associated with unskilled wages: 5 percent in 1955–56 and 1958.

7. *Laundry prices.*—No beta or R^2 values were significant.

In summary, the preliminary results reported are not completely at variance with a priori notions about the relation of unskilled wages and service prices. Hospitals, drycleaners, and laundries are, in general, low paid, labor-intense industries. The medical and dental professions are not. Auto repair and personal care are somewhere between. The results found here are strongly consistent in the case of hospitals and drycleaning; satisfactorily so in the other cases. Only laundries were strongly out of place.

Appendix

Definition of Services Items Included in Personal Consumption Expenditures in National Income Accounts

Clothing service:
- Shoe repair
- Laundry in establishments
- Drycleaning and dyeing
- Other

Housing—Space rental value of—
- Owner-occupied nonfarm dwellings
- Tenant-occupied nonfarm dwellings
- Farmhouses and other, i.e., hotels, clubs, etc.

Household operation:
- Utilities: Electricity, gas, water
- Telephone, telegraph, cable, and wireless
- Domestic service
- Other: Appliance maintenance, moving expenses, postage, premiums on fire, etc., insurance

Medical care and death expense:
- Physicians
- Dentists
- Other professional services: Miscellaneous curative and healing arts
- Privately controlled hospitals and sanitariums
- Medical care and hospital insurance
- Funeral and burial expenses

Personal business:
- Brokerage charges and interest, investment counseling
- Bank service charges, trust services, safe deposit box rent
- Services rendered without payment by financial intermediaries, except life insurance companies
- Expense of handling life insurance
- Legal services
- Interest on personal debt
- Other: Money orders, net union dues, classified ads., etc.

Transportation:
- User-owned transportation:
  - Automobile repair, greasing, washing, parking, etc.
  - Bridge, tunnel, ferry, and road toll
  - Automobile insurance premiums less claims paid
- Purchased local transportation:
  - Street and electric railway and local bus
  - Taxicabs
  - Railway commutation
- Purchased intercity transportation:
  - Railway
  - Intercity bus
  - Airline
  - Other

Recreation:
- Radio and TV repair
- Motion-picture admissions
- Legitimate theater and opera, etc.
- Spectator sports
- Clubs and fraternal organizations
- Commercial participant amusements: Billiard parlors, bowling alleys, etc.
- Parimutuel net receipts
- Other

Private education and research
Religious and welfare activities
Foreign travel and remittances

Source: "U.S. Income and Output," pp. 150-1, table II-4.

Definition of Service Industry as Used in Gross Product Originating Data

Source: Standard Industrial Classification Manual.

Hotels and other lodging places: Includes commercial establishments and institutions engaged in furnishing lodging, or lodging and meals, and camping facilities and space, on a fee basis.

Personal services: Includes establishments primarily engaged in providing services generally involving the care of the person or his apparel, such as laundries, cleaning and dyeing plants, photographic studios, barber and beauty shops, and cleaning and pressing shops.

Private households: Includes private households which employ workers who serve on or about the premises in occupations usually considered as domestic service. Households classified in this major group may employ individuals, such as cooks, maids, butlers, personal secretaries, and managers of personal affairs; and outside workers such as gardeners, caretakers, and other maintenance workers. Laundresses performing work in their own homes or in the homes of others are included.

Commercial and trade schools and employment agencies: Business and commercial education schools, civil service schools; placement agencies; trade schools.

Business services: Includes establishments rendering services not elsewhere classified to business enterprises on a fee or contract basis. (Advertising, consumer credit reporting, duplicating, mailing and stenographic services, services to buildings, news syndicates, etc.).

Miscellaneous repair services and hand trades: Includes establishments engaged in miscellaneous repair services. It does not include auto repair, custom work, and shoe repair.

Motion pictures: Includes establishments producing and distributing motion-picture films, exhibiting motion pictures in commercially operated theaters, and furnishing services to the motion picture industry.

Amusement and recreation, except motion pictures: Includes establishments whose primary function is to provide amusement or entertainment on payment

of a fee or admission charge, except motion pictures. (Including museums, zoological gardens.)

Medical and other health services: Includes establishments primarily engaged in furnishing medical, surgical, and other health services to persons. Associations or groups primarily engaged in providing medical or other health services to members are included, but not those which limit their services to the provision of insurance against hospitalization or medical costs.

Legal services: Establishments engaged in offering legal advice or legal services on a contract or fee basis, the head or heads of which are members of the bar.

Engineering and other professional services: Establishments performing services by engineers, architects, accountants, artists, lecturers, and writers; also includes nonprofit educational and scientific research agencies.

Educational services: Establishments furnishing formal academic or technical courses, and libraries.

Nonprofit membership organizations: Organizations operating on a nonprofit membership basis for the promotion of the interests of the members.

TABLE 1.—*Regression coefficients, manufacturing wage regression*

	Regression coefficient	Partial correlation coefficient	Beta coefficient	Standard error of beta	Value of R^2
Manufacturing wage on—					
1955 industrial employment	0.0065	0.4019	0.3952	0.2598	0.4389
Labor-market condition	.1081	.3134	.3094	.2705	
Price level	.0285	*.5748	*.5776	.2373	
1956 industrial employment	.0236	**.9160	**.9122	.1152	*.8478
Labor-market condition	.0373	.0751	.0769	.2946	
Price level	.0029	.1242	.1272	.2935	
1957 industrial employment	.0076	.5217	.4070	.1921	*.6093
Labor-market condition	.1705	*.5670	*.4895	.2052	
Price level	.0319	**.6676	**.6060	.1950	
1958 industrial employment	.0014	.0923	.0693	.2159	*.6531
Labor-market condition	.1925	**.6785	**.7393	.2310	
Price level	.0335	**.7004	**.6293	.1851	

*Significant at 5-percent level.
**Significant at 1-percent level.

NOTE.—For R^2 to be significant at 5 percent it must equal 0.4660.

TABLE 2.—*Regression coefficients, unskilled wage regressions*

	Regression coefficient	Partial correlation coefficient	Beta coefficient	Standard error of beta	Value of R^2
1. Unskilled wages on—					
1955 service-sector employment	0.0061	0.1731	0.1715	0.3085	0.2469
Labor-market condition	.1660	.4133	.4061	.3246	
Price level	.0281	.4549	.5138	.3180	
1956 service-sector employment	.0012	.0345	.0326	.2963	.2123
Labor-market condition	.1153	.3803	.3827	.2942	
Price level	.0171	.3291	.3198	.2901	
1957 service-sector employment	.0010	.0304	.0253	.2624	.4035
Labor-market condition	.1874	.5741	.5841	.2634	
Price level	.0256	.4818	.4638	.2667	
1958 service-sector employment	.0150	.3287	.3433	.3119	.4592
Labor-market condition	.1783	*.5989	*.7554	.3193	
Price level	.0360	*.5912	*.6678	.2880	
2. Unskilled wages on—					
1955 personal-services employment	.0097	.1088	.0997	.2882	.2328
Labor-market condition	.1489	.3942	.4181	.3081	
Price level	.0258	.4384	.4714	.3055	
1956 personal-services employment	−.0042	−.0463	−.0424	.2891	.2136
Labor-market condition	.1095	.3680	.3634	.2904	
Price level	.0165	.3262	.3089	.2830	
1957 personal-services employment	−.0096	−.1174	−.0936	.2503	.4112
Labor-market condition	.1788	.5654	.5571	.2569	
Price level	.0242	.4756	.4376	.2559	
1958 personal-services employment	.0110	.1089	.1002	.2892	.3787
Labor-market condition	.1393	.5223	.5902	.3046	
Price level	.0289	.5286	.5370	.2739	

*Significant at 5-percent level.

NOTE.—None significant. To be significant at 5 percent, R^2 must equal 0.5267.

TABLE 3.—*Regression coefficients: Price regression*

	Regression coefficient	Partial correlation coefficient	Beta coefficient	Standard error of beta	Value of R^2
Laundry prices on—					
1955 unskilled wages	3.2032	0.4901	0.4951	0.2784	0.3097
Labor-market condition	−.2741	−.1370	−.1190	.2719	
Population	.0007	.2057	.1835	.2761	
1956 unskilled wages	3.2201	.4780	.4838	.2811	.3451
Labor-market condition	.2185	.1254	.1090	.2725	
Population	.0005	.1648	.1412	.2673	
1957 unskilled wages	2.6368	.4471	.4426	.2799	.4061
Labor-market condition	.4838	.2775	.2531	.2770	
Population	.0003	.1101	.0903	.25177	
1958 unskilled wages	3.1123	.4786	.4828	.2800	.3818
Labor-market condition	.1189	.0919	.0781	.2677	
Population	.0009	.2529	.2161	.2614	
Cleaning prices on—					
1955 unskilled wages	1.3849	*.9232	*.9634	.1267	**.8969
Labor-market condition	.0031	.0153	.0060	.1237	
Population	−.0002	−.0583	−.2833	.1257	
1956 unskilled wages	1.3822	*.8785	*.9259	.1591	**.7900
Labor-market condition	−.0016	−.0072	−.0035	.1543	
Population	−.0003	−.5616	−.3249	.1513	
1957 unskilled wages	1.3111	*.8789	*.9708	.1665	**.7898
Labor-market condition	−.0504	−.2178	−.1163	.1648	
Population	−.0003	−.5284	−.3018	.1533	
1958 unskilled wages	1.3030	*.9089	*.9951	.1443	**.8358
Labor-market condition	−.0339	−.2438	−.1097	.1380	
Population	−.0002	−.5043	−.2488	.1347	
Auto-repair prices on—					
1955 unskilled wages	.1358	.2304	.2096	.2799	.3024
Labor-market condition	.0458	.2241	.1987	.2733	
Population	.0001	.3811	.3619	.2776	
1956 unskilled wages	.4742	.1918	.2025	.3276	.1106
Labor-market condition	−.0203	−.0287	−.0288	.3175	
Population	.0003	.2195	.2217	.3115	
1957 unskilled wages	.1650	.2248	.1939	.2657	.4651
Labor-market condition	−.0151	−.0665	−.0554	.2629	
Population	.0003	**.6240	**.6177	.2445	
1958 unskilled wages	.4832	*.7806	*.5315	.1345	**.8572
Labor-market condition	−.1018	*−.7593	*−.4748	.1286	
Population	.0004	*.8442	*.6256	.1256	
Personal-care prices on—					
1955 unskilled wages	.7564	**.6819	**.7076	.2399	.4873
Labor-market condition	−.1027	−.3421	−.2698	.2343	
Population	−.0002	−.3664	−.2964	.2379	
1956 unskilled wages	.8863	**.6726	**.7147	.2786	.4878
Labor-market condition	−.0532	−.1877	−.1457	.2410	
Population	−.0003	−.4946	−.4255	.2364	
1957 unskilled wages	.8468	**.6398	**.7251	.2754	.4252
Labor-market condition	−.1066	−.3133	−.2844	.2726	
Population	−.0002	−.3534	−.3029	.2535	
1958 unskilled wages	.7650	**.6202	**.6938	.2774	.3931
Labor-market condition	−.0443	−.1988	−.1702	.2653	
Population	−.0002	−.3368	−.2930	.2590	
Dental-care prices on—					
1955 unskilled wages	4.4376	**.6343	**.6680	.2578	.4085
Labor-market condition	−.1008	−.0535	−.0426	.2817	
Population	−.0004	−.1398	−.1141	.2556	
1956 unskilled wages	5.0280	**.6140	**.6721	.2732	.3815
Labor-market condition	−.3447	−.1797	−.1530	.2648	
Population	−.0004	−.1217	−.1007	.2598	
1957 unskilled wages	4.2909	.5451	.6130	.2981	.3268
Labor-market condition	−.0986	−.0469	−.0438	.2950	
Population	−.0005	−.1395	−.1223	.2743	
1958 unskilled wages	5.3972	**.6810	**.7496	.2548	.4881
Labor-market condition	−.7583	−.5012	−.4463	.2436	
Population	−.0004	−.1138	−.0861	.2378	
Hospital-care prices on—					
1955 unskilled wages	1.6388	*.7566	*.7615	.2081	**.6144
Labor-market condition	−.1419	−.2768	−.1851	.2031	
Population	.0002	.1948	.1296	.2063	
1956 unskilled wages	1.8774	*.8035	*.8495	.1990	**.6717
Labor-market condition	−.2145	−.4670	−.3222	.1929	
Population	.0001	.1170	.0705	.1892	
1957 unskilled wages	1.7273	*.7864	*.8602	.2136	**.6542
Labor-market condition	−.3379	**−.6172	**−.5245	.2114	
Population	.0002	.2196	.1399	.1966	
1958 unskilled wages	1.6474	*.7446	*.7909	.2242	**.6038
Labor-market condition	−.2356	**−.5773	**−.4794	.2143	
Population	.0001	.0983	.0653	.2092	

See footnotes at end of table, p. 127.

TABLE 3.—*Regression coefficients: Price regression*—Continued

	Regression coefficient	Partial correlation coefficient	Beta coefficient	Standard error of beta	Value of R^2
Medical-care prices on—					
1955 unskilled wages	0.2360	0.4183	0.4181	0.2870	0.2663
Labor-market condition	−.0690	−.3610	−.3431	.2803	----------
Population	.0000	.1624	.1482	.2847	----------
1956 unskilled wages	.2637	.4367	.4396	.2864	.3202
Labor-market condition	−.0826	−.4618	−.4572	.2776	----------
Population	.0001	.2079	.1830	.2723	----------
1957 unskilled wages	.2709	.4994	.4955	.2718	.4403
Labor-market condition	−.1009	−.5601	−.5751	.2689	----------
Population	.0001	.4113	.3570	.2501	----------
1958 unskilled wages	.3363	**.5987	**.5693	.2408	**.5428
Labor-market condition	−.0914	**−.6692	**−.6558	.2302	----------
Population	.0001	.2319	.1695	.2248	----------

*Coefficient is significant at 1-percent level.
**Coefficient is significant at 5-percent level.

NOTE.—To be significant at 5 percent R^2 must equal .5267.

TECHNICAL NOTE NO. 2
PRODUCTIVITY AND OUTPUT IN THE POSTWAR PERIOD
(BY THOMAS A. WILSON)

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Technical Note 2

PRODUCTIVITY AND OUTPUT IN THE POSTWAR PERIOD

By Thomas A. Wilson

I. Introduction

Chapter 3 of the "Staff Report on Employment, Growth, and Price Levels" includes a discussion of the relationship between productivity and output in the economy.[1] Much of that analysis focuses on the effects of intersectoral labor movements upon the rate of growth of aggregate productivity. The underlying data for that portion of the analysis are presented in the report.

Conclusions drawn about the relationship between output and productivity within the major sectors of the economy, however, were partly based upon new data gathered and analyzed by the committee staff. This paper's purpose is to present and discuss the productivity and output data obtained by the committee staff, together with an analysis of the relationship between output and productivity within the manufacturing sector of the economy.

II. The Estimates

A. Major Sector Estimates

Table 1 presents output, man-hour input, and productivity indexes for the major sectors of the economy. The reader must be forewarned, however, that productivity estimates are only as reliable as the output indexes on which they are based. Before using the productivity indexes for analytical purposes, the output source materials, discussed below, should be consulted.

(1) Manufacturing estimates A: The output index is a Federal Reserve output index for manufacturing, based upon 1954 value added weights.[2] The man-hours index is based upon Bureau of Labor Statistics (BLS) data, and is an estimate of total man-hours.[3] Estimate A was presented in order to compare a productivity estimate based upon an output index with a productivity estimate based upon a real-value-added index. Estimate B is the published BLS index of real value added per man-hour in manufacturing. These two estimates show general agreement. Estimate B is the better of the two, and was therefore used in the staff report.

(2) Mining: Output is a Federal Reserve index for mining based upon 1954 value-added weights. The man-hours index is based upon BLS data, and is a total man-hours index.

(3) Public utilities: The output index is the Schultze[4] output index. The man-hours index is based upon BLS data.

(5) Railroads: Revenue traffic, man-hours, and productivity are based upon the published BLS indexes.

(6) Other transportation: Output is an adjusted Schultze output index. Employment data is from BLS. No adjustment was made for possible changes in average weekly hours.

(7) Contract construction: Output is an adjusted Schultze index. The man-hours index is based upon BLS data, and is a total man-hours index.

(8) Agriculture: The productivity index is that published by BLS. The man-hours index is based upon Commerce data for persons engaged in production, and Census data for average weekly hours. The output index was obtained by multiplying productivity by man-hours.

[1] See pp. 88–94.

[2] It must be stressed that these are not official Federal Reserve output indexes.

[3] Employment multiplied by average weekly hours, both as published in Employment and Earnings. For manufacturing, mining, and contract construction, total man-hour estimates were constructed by adding production workers, man-hours, and non-production-worker man-hours (assuming that nonproduction workers worked a 40-hour week).

[4] All Schultze output indexes are from Charles L. Schultze, "Prices, Costs, and Output for the Postwar Decade: 1947–57" New York, Committee for Economic Development, 1959, table 2, p. 29.

(9) Services: The output index is based upon deflated net national income originating in services, as published in U.S. Income and Output and Survey of Current Business. The price deflator used was the implicit price deflator for "Other consumer services." The employment index is derived from the number of persons participating in production, as published in U.S. Income and Output. No adjustment was made for changes in average weekly hours.

(10) Trade: The output index was obtained by combining the Schultze output indexes for wholesale and retail trade, using as weights national income originating in each sector in 1947. The man-hours index is based upon the number of persons participating in production, as published in U.S. Income and Output, adjusted for changes in average weekly hours as published by BLS.

Some of these productivity indexes appear to be fairly reliable; others are less so. In particular, the indexes for contract construction, services, and trade should be used with caution—i.e., one should not attribute much to small changes in these indexes.

B. ESTIMATES FOR TWO-DIGIT MINING AND MANUFACTURING INDUSTRIES

Estimates of output, man-hour input, and productivity for all two-digit manufacturing and mining industries are presented in table 2. Each output index is based upon weighted combinations of four-digit output indexes,[5] the weights used being proportionate to value added in 1954. The man-hours indexes are all based upon BLS data, and are all total man-hours indexes.

Users of these indexes should bear in mind that the output and man-hours series are not strictly comparable, and that, for a particular industry, these productivity indexes may therefore be in considerable error. Another weakness of these productivity indexes is that they are based upon gross output[6] rather than real-value-added indexes. Insofar as movements of the output indexes used deviate from movements of real value added, the productivity estimates will deviate from true productivity.

These estimates should consequently be interpreted with caution, especially if used to analyze the behavior of productivity within a particular industry.

III. The Relationship Between Productivity and Output Within Manufacturing During the Postwar Period

The staff report states that output and productivity for the manufacturing industries were positively associated during the postwar period.[7] This section will present the analysis upon which that conclusion rested.

Tables 3, 4, and 5 summarize the results of various correlations between output and productivity that were computed using the data for manufacturing shown in table 2. The results of these correlations are clear. Changes in productivity are positively associated with changes in output, both for individual industry time series and for cross sections for each year.

A comparison of changes in the rate of growth of output with changes in the rate of growth of productivity for all two-digit manufacturing and mining industries is presented in table 7. The five manufacturing and four mining industries which experienced a greater rate of growth of output after 1953 also experienced a more rapid growth of productivity. Of the 17 manufacturing industries which had slower output growth after 1953, 8 also had slower productivity growth. The lone mining industry with a slower output growth also experienced a slowed growth of productivity.

Evidently an acceleration or deceleration in the growth of output tended to be accompanied by a similar change in the rate of growth of productivity.

Although the conclusion that changes in productivity are positively associated with changes in output is a firm inference from these statistical analyses, one cannot attribute all of the observed relationship between the two variables to a one-way causal relationship. Whereas changes in output may stimulate similar changes in productivity by increasing the rate of utilization of existing capacity or by stimulating innovation within the industry, it is also clear that changes in productivity will tend to result in similar changes in output. Improved productivity, by lowering costs and prices, will lead to higher levels of output.

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[5] These were made available by the Federal Reserve, but are not official Federal Reserve output indexes.

[6] The four-digit output index (upon which the two-digit indexes are based) are gross output rather than real-value-added indexes.

[7] P. 91.

In view of this identification problem, one must not stretch an analysis based upon simple correlations too far.[8] In particular, it would not be prudent to assume that increases in output would yield gains in productivity in a period when output was already pressing upon available capacity.

Since the available evidence suggests that considerable underutilization of capital existed during the 1956–57 boom,[9] and since cross-sectional correlations for both those years reveal a positive relationship between changes in output and changes in productivity, it seems safe to conclude that a further expansion of output would have resulted in productivity gains.

[8] Another weakness of simple correlation coefficients between output and productivity is due to the correlation of errors of observation in output with errors of observation on productivity. If these observational errors are large relative to the true variance of the series, they will cause biases in the correlation coefficients.

[9] See staff report, pp. 70–71.

TABLE 1.—*Output, man-hour input, and productivity, major sectors*

[Index numbers, 1947–49=100]

	1947	1948	1949	1950	1951	1952	1953	1954	1955	1956	1957	1958
Manufacturing (A):												
Output	100.0	103.0	97.0	112.0	120.0	125.0	136.0	127.0	142.0	147.0	147.0	136.0
Man-hours	103.4	103.0	93.6	101.4	109.6	111.1	117.2	106.7	112.6	114.3	112.2	102.2
Output per man-hour	96.7	100.0	103.7	110.4	109.5	112.5	116.1	119.0	126.1	128.6	131.1	133.1
Manufacturing (B): Output per man-hour	97.6	100.1	102.6	109.5	111.2	113.0	118.3	117.4	125.6	127.1	127.7	(1)
Mining:												
Output	101.0	106.0	94.0	104.0	115.0	114.0	117.0	113.0	125.0	132.0	132.0	120.0
Man-hours	104.0	105.0	91.0	91.7	95.6	92.3	90.1	81.7	85.6	88.9	88.0	76.4
Output per man-hour	97.1	100.9	103.3	113.5	120.4	122.6	129.8	138.3	146.0	148.5	150.0	157.0
Public utilities:												
Output	95.6	99.0	105.4	121.1	136.8	148.9	160.7	170.0	187.7	204.4	218.2	(1)
Man-hours	95.4	101.0	103.6	106.2	108.3	109.4	111.2	111.6	112.4	113.8	114.5	(1)
Output per man-hour	100.2	98.0	101.7	114.0	126.3	136.1	144.5	152.3	167.0	179.6	190.6	(1)
Communications:												
Output	93.4	101.3	105.3	112.3	121.5	126.1	132.8	137.7	155.7	167.4	179.2	(1)
Man-hours	93.4	105.0	101.6	99.3	103.6	106.2	110.5	110.1	113.4	119.8	120.7	(1)
Output per man-hour	100.0	96.5	103.6	113.1	117.3	118.8	120.3	125.1	137.4	139.7	148.4	(1)
Railroads:												
Revenue traffic	108.5	104.7	86.7	95.0	104.2	99.4	97.5	88.6	92.2	102.5	97.7	(P) 87.3
Man-hours	107.0	104.8	88.2	84.8	88.1	83.6	81.4	70.4	71.3	70.4	65.8	(P) 55.3
Revenue traffic per man-hour	101.4	99.9	98.3	112.0	118.3	118.9	119.8	125.9	139.1	145.6	148.5	(P) 157.9
Other transportation:												
Output	98.2	100.8	101.0	116.7	126.7	128.7	136.5	135.2	146.2	159.1	163.2	(1)
Employment	102.2	100.6	97.2	98.3	105.3	107.3	108.9	105.3	108.9	113.2	115.8	(1)
Output per man	96.1	100.2	103.9	118.7	120.4	119.9	125.3	128.4	134.2	140.6	140.9	(1)
Contract construction:												
Output	93.4	103.2	103.5	117.3	131.0	131.3	133.5	136.7	145.9	150.3	148.7	(1)
Man-hours	94.2	103.3	102.4	108.9	123.5	127.2	123.8	120.5	127.9	137.1	130.2	(1)
Output per man-hour	99.1	99.8	101.0	107.7	106.1	103.2	107.9	113.5	114.0	109.7	114.2	(1)
Agriculture:												
Output	93.8	106.8	98.6	104.3	97.5	94.6	105.1	106.9	107.3	112.2	112.0	123.2
Man-hours	103.7	99.7	96.5	89.8	85.1	76.9	75.8	72.1	70.0	69.8	66.4	64.8
Output per man-hour	90.5	107.1	107.2	116.2	114.6	124.5	138.6	148.3	153.3	160.7	168.6	190.1
Services:												
Output	98.2	100.0	101.8	108.0	110.8	114.2	118.9	120.1	131.0	139.7	144.1	146.7
Employment	99.1	100.6	100.4	103.5	106.0	106.3	107.7	106.9	112.8	118.2	121.6	123.3
Output per man	99.1	99.4	101.4	104.3	104.5	107.4	110.4	112.3	116.1	118.2	118.5	119.0
Trade:												
Output	99.0	100.8	100.2	113.6	115.6	120.2	124.5	123.7	133.8	137.1	138.0	(1)
Man-hours	99.0	100.9	100.1	101.8	106.0	107.6	108.0	106.9	109.8	112.6	113.0	(1)
Output per man-hour	100.0	99.9	100.1	111.6	109.1	111.7	115.3	115.7	121.9	121.8	122.1	(1)

[1] Not available.

NOTE.—For a discussion of these estimates, see text.

TABLE 2.—*Output, man-hour input, and productivity*

A. MANUFACTURING INDUSTRIES

[Index numbers, 1947–49=100]

		1947	1948	1949	1950	1951	1952	1953	1954	1955	1956	1957	1958
20	Food and beverages:												
	Output	101	99	100	103	105	108	109	111	116	120	120	122
	Man-hours	102.18	100.22	97.59	97.86	100.06	99.56	99.45	97.48	99.32	98.47	95.15	93.37
	Output per man-hour	98.8	98.8	102.5	105.3	104.9	108.5	109.6	113.9	116.8	121.9	126.1	130.7
21	Tobacco:												
	Output	98	101	101	102	108	112	110	105	108	111	115	123
	Man-hours	105.85	101.04	93.14	90.70	92.54	93.65	91.35	90.08	91.48	88.06	83.91	80.64
	Output per man-hour	92.6	100	108.4	112.5	116.7	119.6	120.4	116.6	118.1	126.1	137.1	152.5
22	Textiles:												
	Output	99	105	96	109	106	105	107	100	110	111	106	103
	Man-hours	103.79	105.35	90.86	100.45	97.03	91.89	91.14	80.69	84.71	82.24	76.89	71.55
	Output per man-hour	95.4	99.7	105.7	108.5	109.2	114.3	117.4	123.9	129.9	135.0	137.9	144.0
23	Apparel:												
	Output	97	102	101	108	106	111	113	109	120	121	119	117
	Man-hours	98.72	101.77	99.52	102.35	102.85	105.55	107.84	105.47	106.15	105.83	104.00	98.86
	Output per man-hour	98.3	100.2	101.5	105.5	103.1	105.2	104.8	103.3	113.0	114.3	114.4	118.3
24	Lumber and wood products:												
	Output	101	105	93	112	112	110	114	111	123	119	109	110
	Man-hours	106.60	102.49	90.92	100.09	104.92	98.47	94.77	86.71	92.79	90.00	79.19	75.38
	Output per man-hour	94.7	102.4	102.3	111.9	106.7	111.7	120.3	128.0	132.6	132.2	137.6	145.9
25	Furniture and fixtures:												
	Output	100	104	96	117	111	114	119	124	141	145	139	132
	Man-hours	102.31	104.19	93.50	111.68	107.75	108.41	111.20	100.75	110.18	112.33	109.17	102.94
	Output per man-hour	97.7	99.8	102.7	104.8	103.0	105.2	107.0	123.1	128.0	129.1	127.3	128.2
26	Paper and allied products												
	Output	100	102	98	118	125	119	130	132	149	156	155	157
	Man-hours	101.36	102.38	96.26	106.01	111.23	108.85	115.05	113.63	119.22	122.52	121.00	115.95
	Output per man-hour	98.7	99.6	101.8	111.3	112.4	109.3	113.0	116.2	125.0	127.3	128.1	135.4
27	Printing and publishing:												
	Output	96	101	103	108	110	110	115	120	127	134	134	131
	Man-hours	99.51	100.67	99.82	102.48	103.72	105.39	108.68	109.29	113.04	116.53	116.97	114.88
	Output per man-hour	96.5	100.3	103.2	105.4	106.1	104.4	105.8	109.8	112.3	115.0	114.6	114.0
28	Chemicals:												
	Output	96	103	101	124	139	144	154	153	178	191	199	199
	Man-hours	102.52	103.37	94.11	100.63	110.73	112.93	118.51	115.72	119.17	122.27	123.11	119.58
	Output per man-hour	93.6	99.6	107.3	123.2	125.5	127.5	129.9	132.2	149.4	156.2	160.9	166.4
29	Petroleum:												
	Output	97	104	98	110	122	121	129	123	135	140	139	130
	Man-hours	98.82	102.53	98.66	98.75	104.81	104.70	107.75	104.82	105.08	104.77	103.32	97.16
	Output per man-hour	98.2	101.4	99.3	111.4	116.4	115.6	119.7	117.3	128.5	133.6	134.5	133.8

TABLE 2.—*Output, man-hour input, and productivity*—Continued

A. MANUFACTURING INDUSTRIES—Continued

[Index numbers, 1947–49=100]

	1947	1948	1949	1950	1951	1952	1953	1954	1955	1956	1957	1958
30 Rubber:												
Output	106	102	93	111	116	117	126	118	138	132	132	123
Man-hours	108.59	101.69	89.74	101.14	108.07	109.20	112.93	99.85	113.49	109.14	108.14	97.65
Output per man-hour	97.6	100.3	103.6	109.7	107.3	107.1	111.6	118.2	121.6	120.9	122.1	126.0
31 Leather:												
Output	105	100	95	104	97	104	104	103	112	114	113	109
Man-hours	104.58	101.23	94.18	97.94	89.67	97.06	96.73	90.95	96.39	94.94	92.04	87.63
Output per man-hour	100.4	98.8	100.9	106.2	108.2	107.2	107.5	113.2	116.2	120.1	122.8	124.4
32 Stone, clay, and glass:												
Output	99	104	97	117	129	123	126	122	139	145	143	135
Man-hours	101.86	103.62	94.52	103.65	111.87	106.54	109.03	102.73	111.35	113.50	109.94	101.33
Output per man-hour	97.2	100.4	102.6	112.9	115.3	115.4	115.6	118.8	124.8	127.8	130.1	133.2
33 Primary metals:												
Output	103	107	90	114	125	113	130	106	137	135	130	102
Man-hours	104.35	106.06	89.60	103.93	115.48	106.45	115.63	97.84	112.10	113.86	110.36	90.42
Output per man-hour	98.7	100.9	100.4	109.7	108.2	106.2	112.4	108.3	122.2	118.6	117.8	112.8
34 Fabricated metals:												
Output	102	104	93	114	121	117	132	119	130	130	133	122
Man-hours	105.05	103.53	91.43	105.88	115.93	113.77	124.65	112.56	121.01	121.15	121.62	108.90
Output per man-hour	97.1	100.5	101.7	107.7	104.4	102.8	105.9	105.7	107.4	107.3	109.4	112.0
35 Nonelectrical machinery:												
Output	104	106	90	103	125	133	139	119	128	143	135	114
Man-hours	106.40	105.89	87.71	94.85	115.87	118.97	120.71	106.52	111.40	121.90	119.79	100.94
Output per man-hour	97.7	100.1	102.6	108.6	107.9	111.8	115.2	111.7	114.9	117.3	112.7	112.9
36 Electrical machinery:												
Output	103	102	95	116	129	156	174	159	176	195	196	172
Man-hours	108.37	102.43	89.21	105.10	121.10	130.12	145.34	127.05	133.57	143.14	143.84	130.44
Output per man-hour	95.0	99.6	106.5	110.4	106.5	119.9	119.7	125.1	131.8	136.2	136.3	131.9
37 Transportation equipment:												
Output	94	102	103	120	135	151	185	168	201	195	212	180
Man-hours	102.14	101.12	96.75	104.84	125.03	141.43	162.46	142.37	154.34	150.68	153.77	129.00
Output per man-hour	92.0	100.9	106.5	114.5	108.0	106.8	113.9	118.0	130.2	129.4	137.9	139.5
38 Instruments:												
Output	103	104	93	108	124	148	161	156	167	179	184	173
Man-hours	104.90	102.52	92.58	99.77	119.39	126.33	135.11	125.93	128.09	133.88	133.65	123.84
Output per man-hour	98.2	101.4	100.5	108.2	103.9	117.2	119.2	123.9	130.4	133.7	137.7	139.7
39 Miscellaneous manufactures:												
Output	97	105	98	117	111	113	125	121	138	147	146	141
Man-hours	103.28	103.93	92.80	101.44	104.15	102.39	111.15	102.24	107.72	110.55	107.25	100.08
Output per man-hour	93.9	101.0	105.6	115.3	106.6	110.4	112.5	118.3	128.1	133.0	136.1	140.9

B. MINING INDUSTRIES

10	Metal mining:												
	Output	101	105	93	108	118	108	118	97	123	130	137	113
	Man-hours	101.55	104.05	94.41	96.28	103.28	102.55	107.80	95.68	100.58	107.70	107.14	86.12
	Output per man-hour	99.5	100.9	98.5	112.2	114.3	105.3	109.5	101.4	122.3	120.7	127.9	131.2
11	Anthracite mining:												
	Output	109	109	82	84	82	77	57	52	48	55	49	42
	Man-hours	108.07	106.38	85.56	87.99	79.55	73.03	58.52	44.69	38.42	35.31	32.41	21.82
	Output per man-hour	100.8	101.6	97.0	95.4	104.1	106.8	100.2	126.3	131.7	162.2	155.2	204.3
12	Bituminous mining:												
	Output	114	108	79	93	96	84	81	70	85	90	88	72
	Man-hours	110.61	106.24	83.15	83.07	84.43	72.33	64.28	48.53	52.84	55.51	54.27	43.24
	Output per man-hour	103.1	101.7	95.0	112.0	113.7	116.1	126.0	144.2	160.9	162.1	162.2	166.5
13	Petroleum and gas:												
	Output	96	105	99	108	122	125	131	131	139	146	146	137
	Man-hours	94.68	104.05	101.27	102.09	109.98	117.70	120.06	121.91	127.34	131.50	131.59	122.01
	Output per man-hour	101.4	100.9	97.8	105.8	110.9	106.2	109.1	107.5	109.2	111.0	111.0	112.3
14	Stone and earth:												
	Output	96	104	101	115	126	131	135	148	161	174	174	171
	Man-hours	101.84	102.65	95.51	97.02	106.58	107.93	109.42	107.04	111.39	118.72	115.11	109.35
	Output per man-hour	94.3	101.3	105.7	118.5	118.2	121.4	123.4	138.3	144.5	146.6	151.2	156.4

NOTE.—For a discussion of these estimates, see text.

TABLE 3.—*Correlation between output index and productivity index: Cross sections for all manufacturing industries, 1947–58*

Year:	Correlation coefficient	Year—Continued	Correlation coefficient
1947	[1] 0.5734	1953	0.4017
1948	[1] .5885	1954	[2] .4498
1949	.4377	1955	[1] .6013
1950	[1] .6230	1956	[2] .5474
1951	.4401	1957	[2] .4995
1952	[2] .5015	1958	[2] .5192

[1] Significant at 1-percent level ($r_{.01}$=0.5614).
[2] Significant at 5-percent level ($r_{.05}$=0.4438).

NOTE.—Sample size=20.

TABLE 4.—*Correlation between changes in output and changes in productivity: Cross sections for all manufacturing industries, 1948–58* [1]

Year:	Correlation coefficient	Year—Continued	Correlation coefficient
1948	[3] 0.6206	1954	[3] 0.5168
1949	[3] .4625	1955	[2] .7435
1950	[3] .5296	1956	[2] .5633
1951	.1089	1957	[2] .5900
1952	[2] .7424	1958	[2] .7505
1953	[3] .4614		

[1] These correlations differ from those in appendix B of Study Paper No. 21, which also relate changes in output to changes in productivity, because of two differences in the variables used. The correlations given here are based on absolute changes in the indexes of output and productivity; in addition, productivity is measured in terms of output per total worker man-hour. In Study Paper No. 21, the correlations are based on percentage changes in output and productivity and on productivity per production worker man-hour. In addition, the correlations above are based on 20 industries; the correlations in Study Paper 21 are based on 19; "Miscellaneous" was omitted from the latter cross section.
[2] Significant at 1-percent level ($r_{.01}$=0.5614).
[3] Significant at 5-percent level ($r_{.05}$=0.4438).

NOTE.—Sample size=20.

TABLE 5.—*Correlation between changes in output and changes in productivity: Time series for the period 1948–58, all manufacturing industries*

Industry:		Correlation coefficient
20	Food and kindred products	0.4170
21	Tobacco	[1] .7261
22	Textiles	—.1859
23	Apparel	[2] .7830
24	Lumber	.4420
25	Furniture	.3032
26	Paper and allied products	[2] .7843
27	Printing and publishing	[2] .7730
28	Chemicals	[1] .6905
29	Petroleum and coal products	[2] .8820
30	Rubber	.1288
31	Stone, clay, and glass	.2647
32	Leather	[1] .7103
33	Primary metals	[2] .8785
34	Fabricated metals	.4241
35	Nonelectrical machinery	.4853
36	Electrical machinery	.3826
37	Transportation equipment	.3577
38	Instruments	.4289
39	Miscellaneous	.5682

[1] Significant at 5-percent level ($r_{.05}$=0.6021).
[2] Significant at 1-percent level ($r_{.01}$=0.7348).

NOTE.—Sample size=11.

TABLE 6.—*Changes in productivity compared with changes in output: All manufacturing and mining industries, 1947–53, 1953–57*

		1947–53		1953–57	
		Average annual percent change in output per man-hour	Average annual percent change in output	Average annual percent change in output per man-hour	Average annual percent change in output
	MANUFACTURING				
20	Food and kindred products	1¾	1¼	3½	2½
21	Tobacco	4½	2	3¼	1⅛
22	Textiles	3½	1¼	4⅛	−¼
23	Apparel	1⅛	2½	2¼	1¾
24	Lumber	4	2	3½	−1⅛
25	Furniture	1⅝	3	4½	4
26	Paper and allied products	1⅝	4½	3¼	4½
27	Printing and publishing	1¾	3	2	4
28	Chemicals	5⅝	8¼	5½	6⅝
29	Petroleum and coal products	3⅜	4¾	3	1⅞
30	Rubber	2¼	3	2¼	1⅛
31	Stone, clay, and glass	2⅞	4⅛	3	3¼
32	Leather	1⅛	−¼	3½	2⅜
33	Primary metals	2¼	4	1½	0
34	Fabricated metals	1½	4⅜	⅛	¼
35	Nonelectrical machinery	2¾	5	−⅛	−¼
36	Electrical machinery	3⅞	9⅛	3¼	3
37	Transportation equipment	3⅜	11⅜	5	3½
38	Instruments	3¼	7¾	3¾	3½
39	Miscellaneous	3	4¼	4¾	4
	MINING				
10	Metal mining	1¾	2⅝	4	3¾
11	Anthracite	−½	−11⅜	11⅜	−2¼
12	Bituminous	3½	−5⅞	6¼	2⅛
13	Petroleum and gas	1¼	8⅜	⅜	2¾
14	Stone and earth minerals	4½	5⅛	5¼	6½

NOTE.—Annual average percent changes are base year to terminal year compound growth rates.

TABLE 7.—*Classification of manufacturing and mining industries, by changes in growth rates of output and productivity*

[1953–57 compared with 1947–53]

	Rate of growth of productivity lower 1953–57 than 1947–53	Rate of growth of productivity Higher 1953–57 than 1947–53
Rate of growth of output lower 1953–57 than 1947–53.	13 Petroleum and gas mining 21 Tobacco 24 Lumber 28 Chemicals 29 Petroleum and coal 33 Primary metals 34 Fabricated metals 35 Nonelectrical machinery 36 Electrical machinery	22 Textiles. 23 Apparel. 30 Rubber. 31 Stone, clay, and glass. 37 Transportation equipment. 38 Instruments. 39 Miscellaneous.
Rate of growth of output higher 1953–57 than 1947–53.	----------	10 Metal mining. 11 Anthracite mining. 12 Bituminous mining. 13 Stone and earth minerals. 20 Food and kindred products. 25 Furniture. 26 Paper. 27 Printing and publishing. 32 Leather.

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